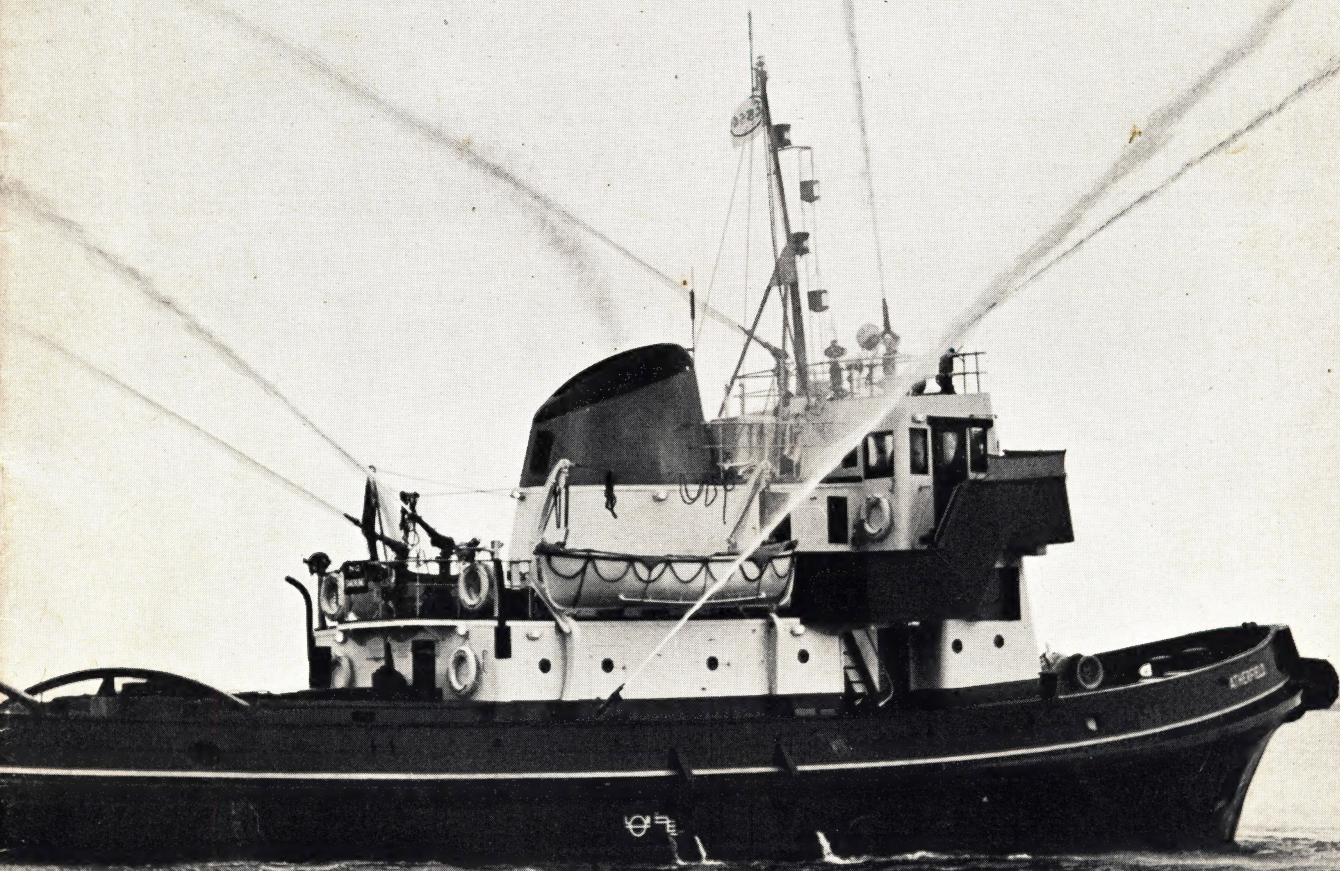


Ships **AND SHIP MODELS**

SEPTEMBER 1956



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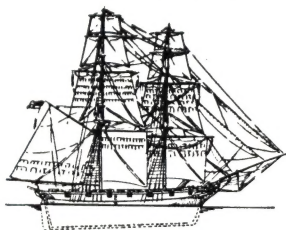
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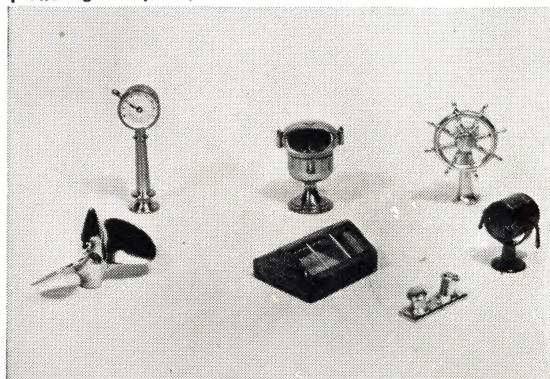
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Ships **AND** **SHIP MODELS**

INCORPORATING MODEL SHIPS & POWER BOATS

Vol. IX. No. 104. SEPTEMBER 1956

THE SHIP'S LOG

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SHIPS AND SHIP MODELS is always on the lookout for first rate illustrated articles, and readers are invited to submit contributions. Constructional details of ship models of all types are required and articles relating to model yachts and yachting. Manuscripts should be sent to the Editor, with stamped envelope for return if unsuitable.

BY THE TIME this issue is in the hands of readers, the 1956 Model Engineer Exhibition will be on the point of closing. A full report of the Exhibition, especially of the ship models and maritime activities, will be published in the October issue, with photographs of the more important models and features.

★ ★ ★

We would like to remind readers about the Grand Regatta at Victoria Park, which will be held on Sunday, September 2. Those who have not yet attended this event would be well advised to do so. There are usually nearly 100 models of power-driven craft, including liners, warships and all types down to the smallest cabin cruiser, and to see them sailing down the pond for the nomination race is quite a thrill. This item takes place before lunch, so a morning visit is suggested. To the hydroplane fan this regatta is the high spot of the year, and record-breaking speeds can always be anticipated.

★ ★ ★

THE RACE for Sail Training Ships from Torbay to Lisbon aroused a surprising amount of interest in the general public. Those of us who were fortunate enough to be in the Torbay area on the day the ships sailed were amazed to see the concentration of motor traffic in Torquay and Brixham during the morning and indeed on the previous day as well.

For the majority it was the first time they had ever seen a square-rigged ship setting her sails and heading out to sea. In a sense it was like a dream that had come true. Our contributor, Alan Villiers, sailed on one of the ships and was thus able to give a first-hand account of the race.

This year's race was in the nature of an experiment, but from the success of the event it may well become an annual or at least a biennial event. The yearly programme of the training ships could, in some cases at least, be adjusted to fit in with the race. Such an event would give additional interest to their training for both cadets and officers: it could indeed form the focal point of the course.

To handle a ship with sufficient skill and smartness to win such a race is a real test of the proficiency gained.

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With the 10 Raters at

FLEETWOOD

News of Royal patronage at the start
of the 1956 championship

By EDWARD BOWNESS

THE 10 RATER championship at Fleetwood received a great fillip at its start by the announcement that the Model Yachting Association had received a letter from Buckingham Palace stating that the Duke of Edinburgh had consented to become patron of the association.

Twelve boats were entered, the entry being much smaller than anticipated. And news that three Frenchmen would be unable to compete was the cause of further disappointment.

There was some apprehension, too, that the event would not last the five days allotted to it. But the O.O.D., Mark Fairbrother, arranged for four rounds to be sailed, with the stipulation that if time and conditions did not permit them to be completed the awards would be made on the results of the first two. However,

there was a good breeze throughout—and all four rounds were sailed. As the wind shifted from point to point the event was an excellent test of both the design of the boats and the skill of the skippers in handling them.

Although the international character of the event was impaired by the absence of the French contingent, the presence of Hamburg's Carl Burghardt and J. T. Bisset (Saltcoats) and L. Paton (Ulster) did in some measure make amends.

Placed each time

Herr Burghardt acted as mate to A. F. Hill of the Y.M. 6m. O.A. who, with his boat *Aegir*, finished third after coming in second in both the second and third rounds.

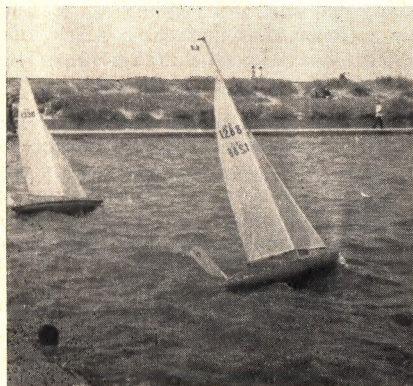
As to the consistency of the racing it may be mentioned that with one exception the three leading boats occupied the top positions each day. The exception occurred in the second

round when P. Mustill of North Liverpool with *Cordelia* was two points ahead of J. Anderton of the M.Y.S.A. The winning boat *Sirocco*—skipper J. Luce of Birkenhead—made the highest score in each of the four rounds (for scores see table).

At the prize presentation Herr Burghardt—he is studying the scope of model yachting interest in Britain and the way it is carried out—presented, on behalf of the Hamburg M.Y. Club, burgees to the presidents of the M.Y. Association and the Fleetwood M.Y. Club.

Before he returns to Germany Herr Burghardt is to visit a number of clubs and their sailing waters in the South of England. His interest and enthusiasm made a very good impression on his British confreres and I, personally, feel certain that this, his first visit, will have far-reaching results in both German and British model yachting circles. ⚓

Below, left: 'Francis' 1388 and 'Alma III' 1288 (in second suit) on a hard beat to windward



Below, right: 'Blue Nymph' 1407 and 'Minerva' 1412 getting away to a good start

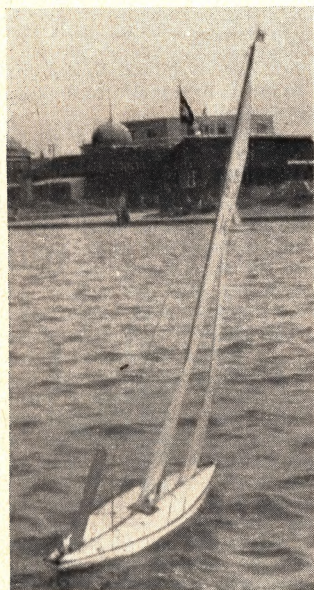


Miss Pauline Corrooin acts as mate for A. Johnston of North Liverpool



RESULTS

No.	Name	Owner	Club	Mon.	Tues.	Wed.	Thurs.
1438	<i>Sirocco</i>	J. Lace	Birkenhead	43	91	129	178
1381	<i>Sleuth</i>	J. Anderton	M.Y.S.A.	41	71	111	155
1428	<i>Aegir</i>	A. F. Hill	Y.M. 6m. O.A.	38	80	114	144
1397	<i>Cordelia</i>	P. Mistill	Nth. Liverpool	38	73	108	138
979	<i>Estrellita</i>	J. S. Thomas	Bristol	24	51	91	124
1288	<i>Alma III</i>	J. M. Fitzgerald	Bolton	29	51	86	106
1338	<i>Francis</i>	H. Atkinson	Bradford	20	48	68	97
1407	<i>Blue Nymph</i>	L. Paton	Ulster	18	48	74	94
1205	<i>Flora</i>	E. J. Blackshaw	Bolton	25	38	59	89
1412	<i>Minerva</i>	A. Johnston	Nth. Liverpool	26	57	61	82
1457	<i>Friar Tuck</i>	J. T. G. A. Bissett	Saltcoats	10	33	49	68
1055	<i>Rivington Lass</i>	E. Andrew	Ramsey	9	19	40	45



Above: 'Sleuth' 1381 (2nd) and 'Sirocco' 1438 (1st) starting in one of the boards

Above, left: Carl Burghardt of Hamburg was a popular visitor and mate for Alan Hill of Y.M.Gm. 6 O.A. (3rd)

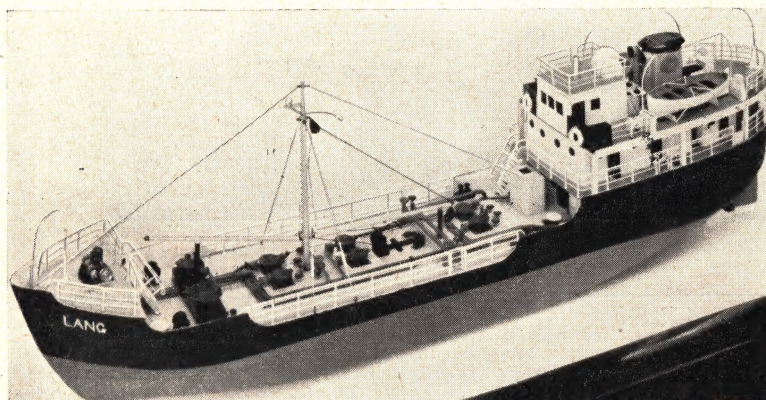
Left: 'Cordelia' 1397 (4th) close-hauled and going well

Far left: 'Aegir' 1428 (3rd)

CLIFFORD COWLING
built

A CLOCKWORK TANKER

but first he had to devise . . .



WHEN Clifford Cowling went to live in Droitwich he placed a regular order for SHIPS AND SHIP MODELS. The news-agent's cousin is an A.T.V. agent—and Mr. Cowling recently exhibited his model tanker in the A.T.V. Midlands programme. "News and Views."

A picture of the tanker, the 400 ton *Lang*, built for Shell Tankers in 1953 by Philip and Sons of Dartmouth, triggered Mr. Cowling's enthusiasm and he enlisted Shell's technical assistance. During the next 10 months he built this accurate scale model from plans and drawings provided by Shell.

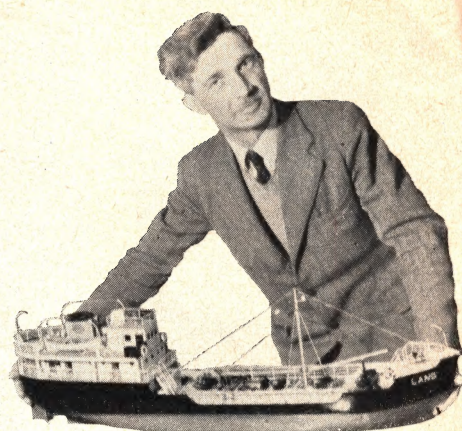
Using sheet brass, copper and plywood for the main parts of the hull, Mr. Cowling has shown considerable inventiveness in fashioning his fittings from common objects. Boot eyelets became portholes,

thimbles ventilator cowl, model car tyres were transformed into lifebelts and air vents were made from cycle-cable nipples.

The ship's boats, only 3 in. long, are a testimony to Mr. Cowling's eye for detail. They are properly clinker-built with tiny overlapping strips of wood and are lowered over the side from outboard-swinging davits. All the doors open and are fitted with catches.

The hatches open, and under one of the covers is the clockwork motor which powers the vessel. The m.v. *Lang* is built to float and travels at the scale speed of 9½ knots. The model is ¼ in. scale and weighs, with ballast, about 12 lb. She is just over 36 in. overall and about 6 in. at her widest part.

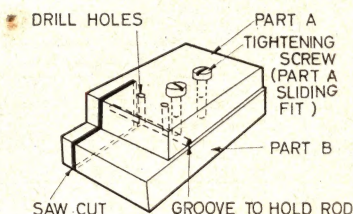
Shell Tankers report that the real m.v. *Lang*, nearly 145 ft. long, is engaged in the Malayan and Indonesian coastal trade.



... HIS OWN ROD DRILLING JIG ...

MR. COWLING soon discovered that it was no easy task to drill a rod with precision, so he designed a jig which enabled him to achieve remarkable realism in building rail stanchions.

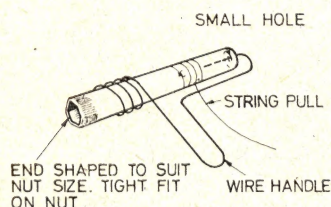
A piece of flat soft iron is grooved to take a length of brass rod of appropriate diameter and holes are drilled in the line of the groove. The holes are spaced to take the rails,



which Mr. Cowling made from half-round brass wire. A second piece of soft iron is bolted to the first piece to give a firm platform for the drilling operation.

A saw-cut through both pieces of iron enables the rod to be cut to uniform length.

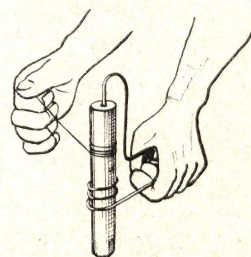
... AND A WAY OF FIXING AWKWARD NUTS



PUTTING on nuts in inaccessible places led Mr. Cowling to make up a simple but ingenious jig which will be found useful in every workshop.

A short piece of tube is shaped at one end to take a hexagonal nut (a ready-shaped box spanner may be used). The other end of the tube is filled with solder and drilled to take the wire handle so that the tube can revolve freely.

The wire handle terminates in a loose coil about halfway down the tube. A piece of garden string is threaded through a hole in the centre of the tube and wound round the tube.



When the nut is held in position by the tube a pull on the string rotates the nut and turns it home.

★ • ★ • ★ • ★ • ★ • ★ • ★ • ★

BUILDING AN EARLY

SIXTH RATE

This instalment deals with the rest of the standing rigging and continues with the running rigging details

by R. J. COLLINS

ALL THAT IS LEFT of the standing rigging now are the horses of the head, bowsprit and lower yards and the standing lifts for the cro'jack and sprityard.

To take the last first. A small deadeye is stropped to a short pendant from either the mizzen cap or the bowsprit. A rope from the centre of each half of the yard also ends in a small deadeye and these two are laced together in the usual manner—1½ in. for the cro'jack, 2 in. for the sprit and 1 in. for the lanyards. (They are shown in the figures of the yards.)

As far as I can see on Deane's draught the horses of the bowsprit (Fig. 91)—a form of lifeline for the men walking out on it—started at the foretop stay. However, he secures his stay by means of two deadeyes instead of the long tackle we, and Battine, are using—so I suggest that the pair of lines start just below the cap of the sprittop instead and run back to the beakhead bulkhead. Here they are held by deadeyes about three feet apart. The lower deadeyes were stropped to eyebolts below the rail.

"Spreaders"

I can find no account for such at this date but I think there must have been a couple of "spreaders"—one about halfway and the other near the cap to keep the lines apart. The horses for the head (Fig. 92) run from an eyebolt in the head rail just behind the figurehead back to the deadeyes on the bulkhead and close to the outer edge. This rope serves as a guard across the sweep of the beak. (Ropes 3 in., deadeyes 5 in.)

Both these sets of ropes should be 3 in.—the lanyards 1 in. and the deadeyes small (5 in.). The horses for the lower yards are foot ropes. Each of these consists of two ropes, one end held by an eye splice over the yardarm and the other in a small (5 in.) deadeye. Both deadeyes are laced together and the whole should hang just below the yard. Fore 2½ in., main 3 in. and lanyards 1 in.

These are also shown in the figures of the yards.

The sling for the sprityard (Fig. 93) is of 3½ in. and has an eye splice in one end through which the other end passes after going round the yard and bowsprit. The figure should make this clear. The support for the cro'jack (Fig. 94) is of 2 in. and also has an eye splice, but the rope passes through a 9 in. block on the yard and is carried round the back of the mast-head through the eye splice and secured.

Before we get on with the running rigging we have to consider several things—and belaying points are among them. There are quite a number of rigging plans in which the ropes end some distance above the deck with an arrow just pointing down. This is all right for those experts who know just where each rope finishes, but little help to the rest of us who don't.

Modern models no better ?

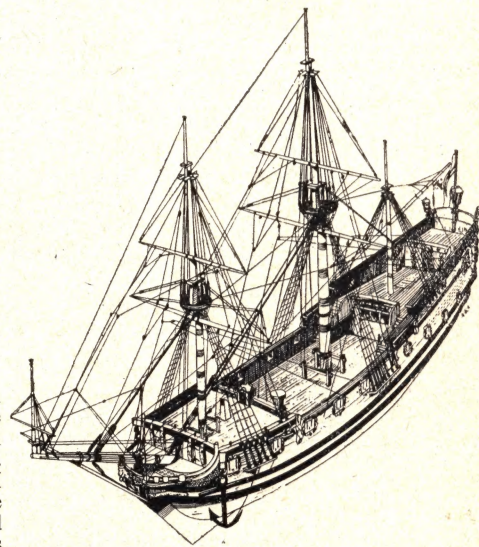
When we come to contemporary models we are not much better off. I have yet to see one of these models with anything near the correct number of belaying pins. In fact quite a number of rigged models haven't a pin at all. I cannot believe that most of the rigging finishes off on the rails, especially the slender rails round some of the quarter decks. On the 50-gun ship—with which I dealt in an earlier series—quite a number of lines were simply made off round the lower ends of the shrouds or stays.

To cut down the belaying points I may put two ropes on one pin or cleat. I think this is wrong, but it was frequently done on the old models. Belaying pins can be turned from brass, and that is a straightforward job. I turn mine from wood—and this is how I do it :

I mount a very sharp chisel with the cutting edge upright in the slide rest of my lathe (a Super Adept). In the chuck I mount a length of 1/8 in. dowel. In a small piece of tin I drill two holes, one 3/64 in. and the other 1/32 in. Start the lathe and hold a fine flat file to the dowel until it is

nearly 3/64 in. Run the draw plate up the dowel to make sure it is correct to size. Now bring into use the chisel in the slide rest. Move it up about a scale 1 ft. 3 in. from the end (this is two and a half turns on my main screw) and make a slight cut. With the aid of a file and the smaller hole in the draw plate bring this part down to 1/32 in. The handle is shaped with a small round file and the whole is parted off about a foot from the last cut (two turns). I don't know how large the pins were in those days but these look all right. In any case you can make them to suit yourself. After a short practice each pin can be made in a few minutes. The holes to receive the pins are drilled with the same drill used for the shank size in the draw plate. The pin is shown in Fig. 95.

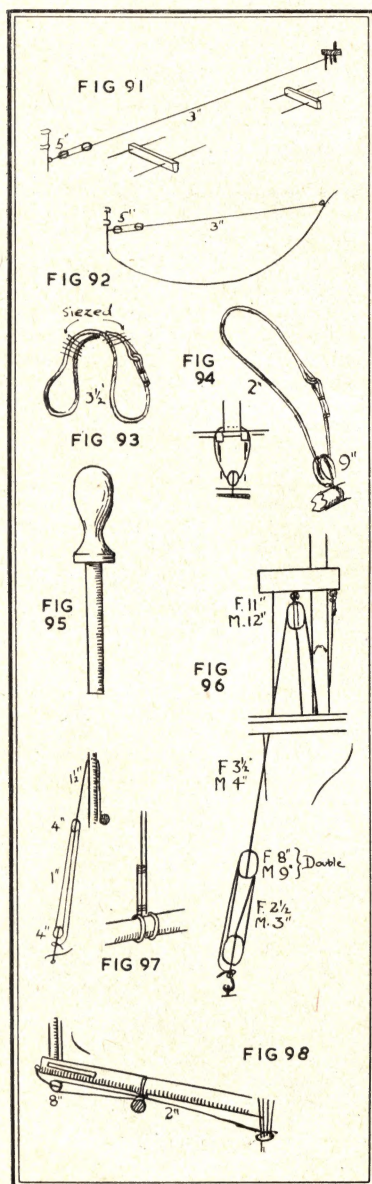
A piece of stiff wire with one end flattened and cut to a V shape, while the other end is bent into a small hook, is also very useful in manipulating the ropes round the pins. Rigging lines, which have to be threaded through blocks already in position,



SHIPS AND SHIP MODELS

Building an early Sixth Rate

.....



can be managed much better if the end is "sharpened" with a touch of balsa cement.

We can now get on with the running rigging and start with the top ropes (Fig. 96). These are the ropes which control the rising or striking of the top masts. The standing end is made fast to one of the forward eye bolts on the lower mast cap. The running end passes through the sheave in the heel of the top mast then up and through a single block suspended from the after eyebolt of the mast cap—naturally on the opposite side—and from there down through the top and ending in a double block about six feet from the main deck.

Hooked to a ringbolt on the deck is another double block and the two are rove together. There is only one top rope to this size ship so whatever side the fore top rope comes to the deck the main is on the other. Sizes: fore pendant $3\frac{1}{2}$ in., falls $2\frac{1}{2}$ in., single block 11 in., double blocks 8 in.; main pendant 4 in., falls 3 in., single block 12 in., double blocks 9 in. The foremast rope is attached to a ringbolt level with the beginning of the hatchways and the main with the ending. The bolts can be on, or very close to, the combings. There are no top ropes to the other masts.

Halyards and tackles

Halyards: These are the ropes attached to the centre or slings of the yards. I have used the term at the beginning of the paragraph in its more general sense to mean the tackles by which a yard is hauled. Some of the yards are controlled by more or less complicated tackles and when this is so the rope actually secured to the yard is called the "tie." At the other end of the set-up the rope handled by the sailors is called the halyard, and if there is another rope between these it is known as the falls.

Spritsail top mast: The tie is of $1\frac{1}{2}$ in. rope and has its standing end made fast to the yard (Fig. 97). The running end is rove through the sheave at the masthead and ends in a 4 in. block which, as the yard is lowered, should be about a couple of feet down. This is connected by a three part tackle of 1 in. to another 4 in. block stropped to the knee; the running end is made off below the block.

Spritsail halyard: An 8 in. single block is stropped with a short pendant to an eyebolt in the end of the bowsprit (Fig. 98). The halyard is made fast to the yard and passes out through the block, back over the yard and is belayed to the port side of the gammoning.

Fore jeers: Two 16 in. treble blocks are stropped with very long strops which slip over the masthead (the

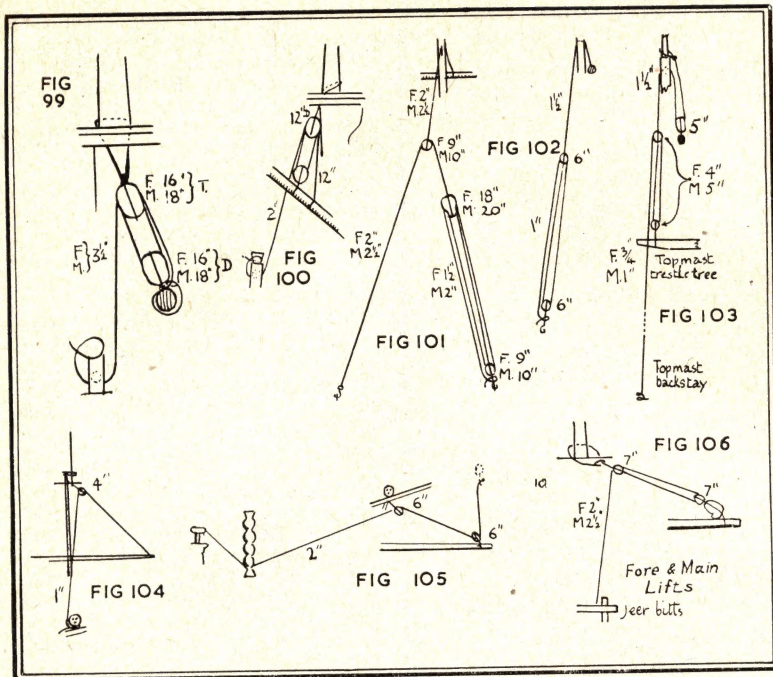
cap should be removable) and hang down clear, and outside of, the trestle trees (Fig. 99). See that the strops sit tight on the shrouds and stay. The rope is $3\frac{1}{2}$ in. and has a small eye splice at one end. Use the eye splice to form a larger loop which goes over the yard inside the horns. From here it passes through the inner sheave of the treble block, from front to back, down to the inner sheave of the double block—which should already be on the yard—up to the treble and back again and, finally, through the outer sheave of the treble block and down to the jeer bitts. Here it passes through the sheave in the leg from bow to stern and is finally made off over the arm of the bitts. The main jeers are the same but with 18 in. blocks. The mizzen jeer (Fig. 100) has a 12 in. double block hung by a long strop from the masthead but behind the mast. Secured to the lateen yard is a 2 in. rope passing up through the double block, down through the single block on the yard, up to the double again and down to the sheave in the port knighthead and belayed there.

The fore top halyard (Fig. 101) is in three parts. The tie, which starts at the slings, goes through the sheave at the masthead just below the trees and down aft of the mast about halfway to the lower cap, where it ends in a single block. The runner is hooked to a ringbolt on the side of the hull and, passing through the block on the tie, goes down to about level with the lower cap and ends in a long tackle block. Hooked to an eyebolt to the opposite side to that of the runner is another single block and this is joined to the long tackle by the halyards. The main is the same as the fore, but the sides are reversed. Sizes: fore tie 2 in., block 9 in., runner 2 in., long tackle block 18 in., halyards $1\frac{1}{2}$ in., block 9 in.; main tie $2\frac{1}{2}$ in., block 10 in., runner $2\frac{1}{2}$ in., long tackle 20 in., halyards 2 in., block 10 in.

The top gallants

Mizzen topsail halyard: The $1\frac{1}{2}$ in. tie passes from the yard through the sheave at the masthead and down about halfway to the top where it finishes with a 6 in. single block (Fig. 102). Another 6 in. single block is hooked to an eyebolt on the starboard side of the hull between the third quarter deck gun port and the stern. The two blocks are joined by a 1 in. halyard and belayed beneath the lower block.

The top gallant halyards: The tie started at the masthead and passed down to the 5 in. block at the slings, then back and through the masthead and down to about a third of the top gallant mast where it ended in a



4 in. block (Fig. 103). This was joined in a three-part tackle to a similar block which was made fast to the topmast trees. The running end was taken straight down and belayed to the base of the starboard topmast back stay. Fore tie $1\frac{1}{2}$ in., halyards $\frac{3}{4}$ in., main tie $1\frac{1}{2}$ in., halyards 1 in. All the main blocks are 5 in.

Lifts: These are the ropes which support the ends or arms of the yards in conjunction with the jeers or halyards, lifting the yard up or steadying it on the way down.

Dr. Anderson mentions that the spritsail topmast lifts (Fig. 104) were, despite the small size of the yard, the same as the others. That is with a block on the yardarm and another at or near the cap. Battine, however, only gives two blocks—which means

that the standing end of the lift was at the yardarms, the 1 in. lift passing up to the 4 in. block, having a short pendant from the masthead, and then down to belay at the base of the mast. There is a shortage of belaying points there, so the base of the forward deadeye could be used. I willingly bow to Dr. Anderson's knowledge and would say that a two-part lift would also be correct. I show the direct pull because within the limits of correctness I am trying to keep the rigging as simple as possible.

Spritsail yard lift: The standing end of the 2 in. rope is secured near the end of the bowsprit, say the forward end of the B, or, as I have drawn it, used as the sheet for the sprit topsail (Fig. 105). From there

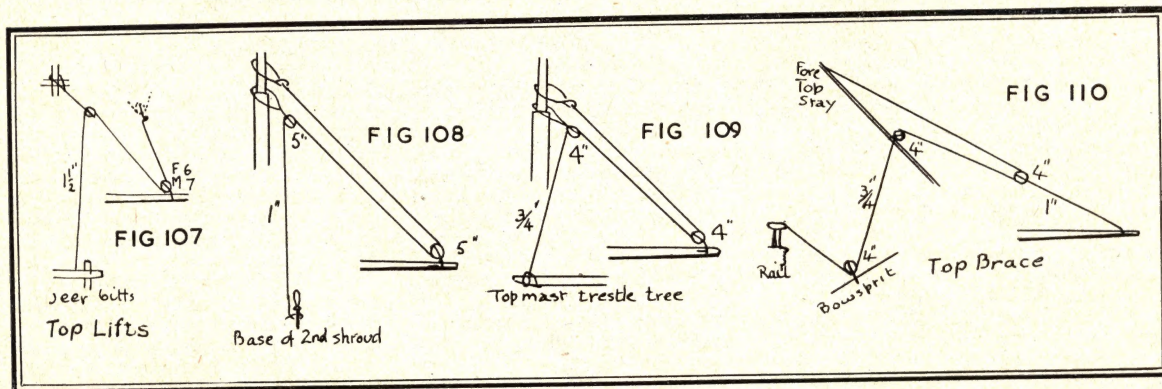
it goes to a 6 in. block on the yard and back to a similar block on a short pendant, about the position of the after deadeye, and then back to the beakhead rail via the fourth sheave in the rack block which is fastened either side of the gammoning.

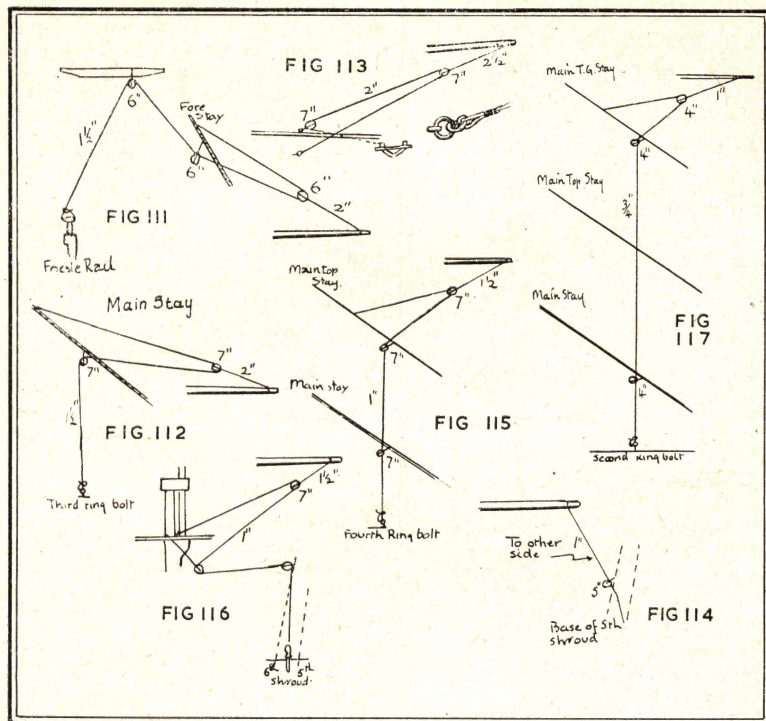
Fore lifts: A 7 in. block on a pendant swung from beneath the top (Fig. 106). This pendant was made fast round the masthead and was long enough to reach almost the futtock shrouds. The standing end of 2 in. is made fast to the strop and goes out to the 7 in. block stropped to the sheet block, back to the block at the standing end and down to the jeer bitts. The main is similar but with $2\frac{1}{2}$ in. rope. I am not too happy about these belaying points. They may have gone out to somewhere behind the shrouds. There are no lifts for the cro'jack.

Two methods

The fore top lifts (Fig. 107) are, as I have mentioned, combined with the sheets and can either start at the caps or at the clew blocks. I presume that in each case they would be held by a loop and toggle, the toggle being on the lift. In modelling I find that it helps to steady the top gallant yards if the lifts are treated as sheets and attached to the clew blocks. If you are leaving out the "sail" rigging they must be attached to the caps. From here it goes to the block on the yardarm and back to a block slung from beneath the trees by a three-foot pendant, and from there down to the jeer bitts. Fore and main are similar with the ropes $1\frac{1}{2}$ in., blocks 6 in. at the fore and 7 in. at the main. The mizzen lifts (Fig. 108) are also similar but with their top blocks and pendants from the shoulder of the mast. Rope 1 in. and blocks 5 in. Belayed to run at base of second shroud.

Fore top gallant lifts: Blocks at the head of the mast and at the yardarms (Fig. 109). Rope from masthead to yardarm block, back to masthead





and down and belayed to the after trestle tree of the top. Both masts were the same with $\frac{3}{4}$ in. ropes and 4 in. blocks.

Braces were the ropes which controlled the lateral swing of the yards. They consisted of a pendant, generally black, and a runner going aft before belaying at deck level. The mizzen braces, for obvious reasons, ran forward. The length given for the pendants is the actual length of the rope used and includes the splicing round the block and the eye splice and loop for the yard.

Sprit topsail: Pendants 1 in., 3 ft. long, blocks 4 in. (Fig. 110). Standing end of $\frac{3}{4}$ in. at fore top stay level with sprit topmast head. From here to pendant blocks and back to blocks on stay about three feet below the standing end and from here down to blocks stropped to a collar on bowsprit and from there to beakhead rail.

Sprit yard: Pendants 2 in., 6 ft. long with 6 in. blocks (Fig. 111). Brace $1\frac{1}{2}$ in.: with its standing end on fore stay, down to blocks on pendants and back to the blocks, on short pendants, on the stay, up through the inside blocks slung beneath the top and down to belay on the fo'c'sle rail.

Fore braces: Pendants 2 in., 12 ft. long, blocks 7 in. (Fig. 112). Braces of $1\frac{1}{2}$ in. with the standing end made fast to the main stay at a level about halfway up the mast. From there to the pendant blocks, back to

blocks with short pendants on the stay about two feet below the standing end and from there down to the third ringbolt on the deck.

Main brace: Pendant $2\frac{1}{2}$ in., 12 ft. long, blocks 7 in. (Fig. 113). Brace of 2 in. with standing end at ringbolt on the outside of the hull far aft. From there to pendant block and back to block attached to eyebolt on the capping rail a couple of feet forward from the standing end, then to belay at the after knee on the quarter deck.

The mizzen brace (Fig. 114) has no pendant. The standing end of a 1 in. rope was made fast to the yardarm and passed forward and across to a 5 in. block stropped to

the last main shroud at about the same level (but on the other side of the ship) and from thence down to the pin.

Fore top braces: Pendants of $1\frac{1}{2}$ in., 6 ft. long. Standing end of 1 in. brace on main topmast stay level with about halfway up the fore topmast (Fig. 115). From there to pendant blocks, back to blocks on stay a couple of feet lower down, then to fourth ringbolt on deck via lead blocks on main stay. All blocks 7 in.

Brace problem

Main topmast brace: Pendant $1\frac{1}{2}$ in., length 7 ft. 6 in., blocks 7 in. The run of the 1 in. brace presents a problem. Battine gives six blocks and I know the complicated run was followed, but Deane shows the standing end halfway up the mizzen masthead and this, it seems to me, would interfere with the mizzen topsail. I have placed it as low down as I can, but I still don't like it! The run goes from here to the pendant blocks and back to blocks (with short pendants) on the forward mizzen shroud above the cro'jack yard, then forward to a block on the after main shroud below the cro'jack brace block and down to belay on a pin in capping rail between the fifth and sixth shroud.

Fore top gallant brace: According to Battine's table of rigging there were no pendants, in which case the standing end of the $\frac{3}{4}$ in. brace is made fast to the yardarm and from there passes back through 4 in. blocks on the main top gallant stay (Fig. 117). Then down to the second ringbolt on the deck via 4 in. blocks on the two other stays. However, his table of blocks states that there are two blocks for the pendants. So, as I imagine both systems could be found on small ships of this period, you can take your choice. I think I would vote for pendants, in which case they would be 1 in. and 6 ft. long. To keep the number of blocks correct, leave off the leads on the topmast stay.

● To be continued

News of power boats

SAIL enthusiasts who have more than a passing interest in power boat models are recommended to our associate journal, *Model Engineer*.

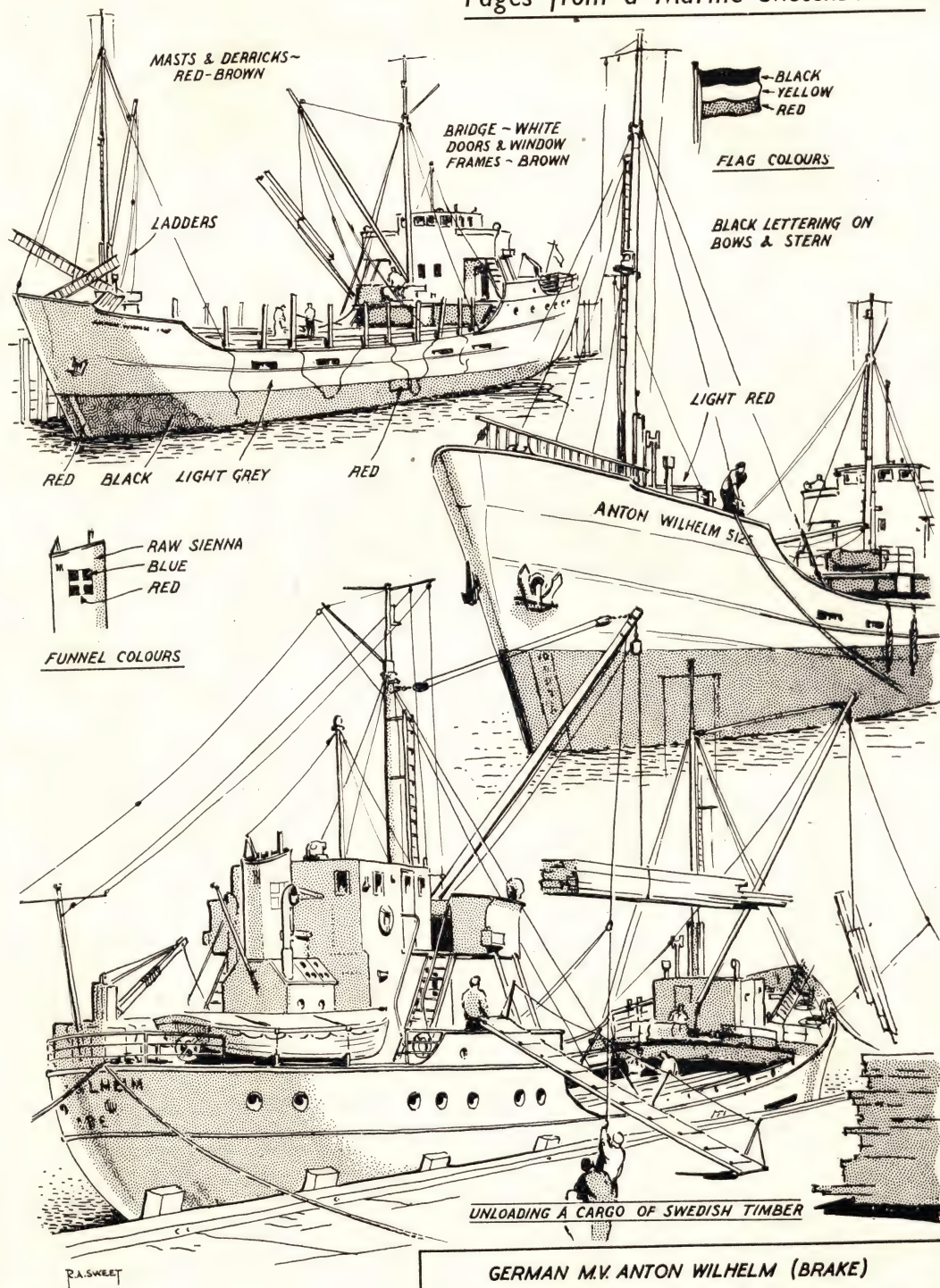
All phases of the pastime are comprehensively covered by *Model Engineer*—reports of regattas, descriptions of power boats, designs for their construction and details of how to make engines: steam engines, i.c. engines, paddle-wheelers.

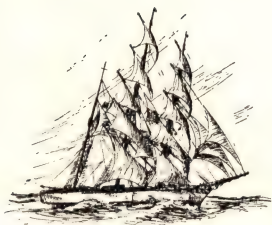
In the current issue (September 6), for example, is a three-page illustrated report of the St. Albans International meeting. This report

deals with power boats only, of course, but in the same issue there is the first account of the Model Engineer Exhibition in which the ships at the show will naturally be featured and also the story of *Mayflower*—the replica of the Pilgrim Fathers' ship—which will be sailed to America by Alan Villiers.

Model Engineer is on sale every Thursday and costs 1s. It is stocked by all newsagents but if there is any difficulty in obtaining a copy, a line to us at 19/20, Noel Street, London, W.1, will do the trick.

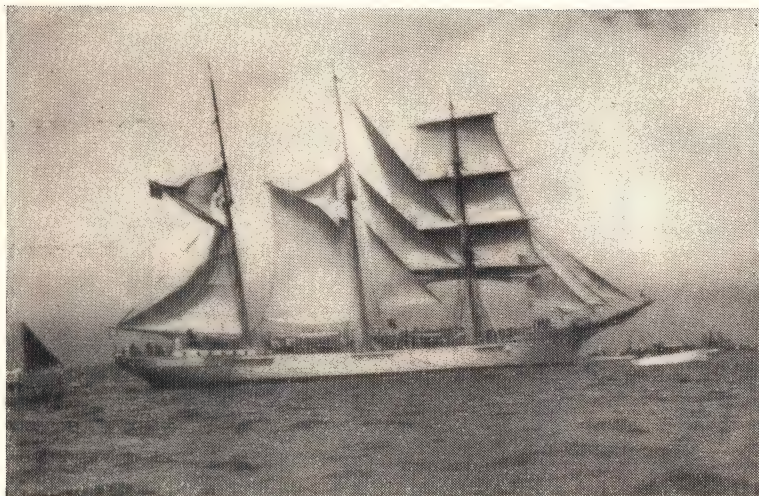
Pages from a Marine Sketchbook—5





ALAN VILLIERS pays tribute to . . .

A magnificent



Above: 'Mercator' setting sail for the starting point



Left: The three-masted fully rigged 'Sorlandet' (Norway) lying at anchor in Torbay

THERE IS NO DOUBT that the Torbay to Lisbon race, organised by the Sail Training Association of Great Britain, was a magnificent success. The grandeur of that collection of sailing ships at anchor in the River Dart, the fine sail along the coast from the Dart to Torbay, the glorious spectacle of the start—these were unforgettable.

It is true that I read more extravagant statements about sailing ships than I ever had in my life before. The assemblage (which after all included only five square riggers) was hailed in some sections of the Press as the greatest collection of big sailing ships ever seen anywhere this century—and the 2,000-odd ton barque *Sagres*, I read, was "one of the largest sailing vessels ever built." Shades of Falmouth, San Francisco Bay, Valparaiso Roads and Mariehamn in the inter-war years! Are memories so short or is it that we are after all just a nation of dopes about ships?

It was glorious to see these fine, white ships, moored against the pleasant background of good old Devon, but I think we ought to keep our sense of proportion in the matter. I often saw four and five big Cape Horners together in Falmouth Bay after a grain race from Australia: there were often the same number loading at once off Port Victoria, and many a time I remember counting twenty and even thirty big square riggers in my home town of Melbourne, to say nothing of Newcastle, N.S.W., or of London, or the Cape Town docks.

It was a good show to get together so many fine ships, the larger all devoted to training. But I couldn't help thinking that there was an object lesson in it all for the nation which was responsible for the assembly and which—almost alone among those competing—could not produce anything like a square rigger designed and built and publicly financed for the training of boys . . . and never in all its long and great sea history had

The weather was bad, but that didn't really matter . . . And now what about another—and a much bigger—rally in a couple of years' time?

s u c c e s s

possessed such a ship for its merchant service nor a sailing school ship of any kind save Devitt and Moore's big cargo carriers and White Star's *Mersey*.

The weather was bad almost the whole week, but organisation was splendid and the ships and the fifteen hundred young seamen manning them were all splendidly entertained and feted.

Everyone was glad to see the Portuguese naval barque *Sagres* take so many of the inshore regatta prizes, remembering that, after all, she was the first big entry, and it was the enthusiasm of the Portuguese, led by the Portuguese Ambassador in London, Senhor Pedro Theotónio Pereira, which had helped so much to start the ball rolling.

The inshore regatta was a great success despite the weather, and the ships in a way were sorry to leave Dartmouth. In the schooner *Bellatrix* we went round Berry Head and put down our anchor in Brixham Harbour on the night before the race—one reason being to have a good look at the new *Mayflower* building there—and *Juana* and the French *Sereine* came in there, too. But most ships anchored in Torbay.

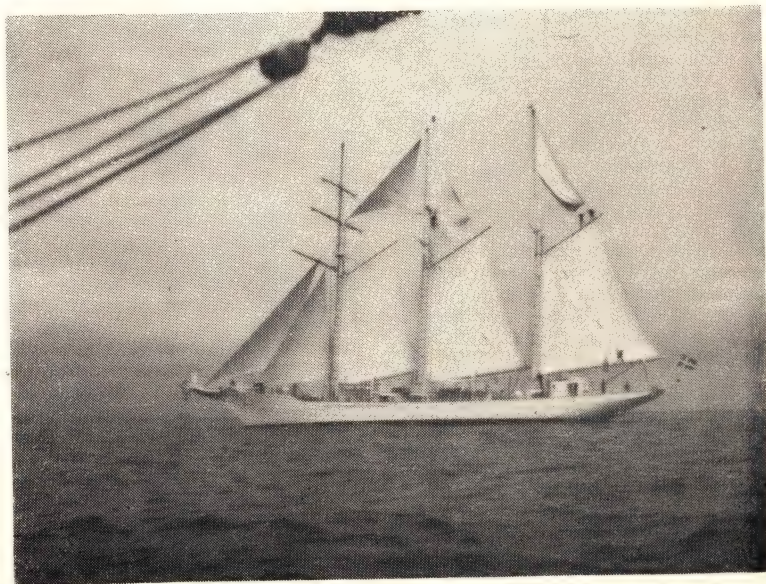
Juana, the Argentine entry, was obviously a "hot" number. Sixty feet overall, 12 ft. beam, and 28 tons, she was built at the naval arsenal in Buenos Aires in 1952—regardless of expense by the look of her—and she'd won at least three hard ocean races in her brief career including one international event from Buenos Aires to Rio. If she could win that, I knew she was a fast stepper, and even a good old John Alden schooner like our *Bellatrix* had no chance against her. She'd been shipped up as freight and she was crewed by a smart racing team of Argentine naval officers who obviously knew how to handle her.

A big modern sloop, she was a beauty. One or two of the others had shaken us out of whatever complacency we might have felt (which was in truth not much), like the crimson

Right: 'Georg Stage' (Denmark) with her yards manned prior to setting sail for the big start



Below: The 'Flying Clipper' having trouble



'Sagres' was cursed with calm and light winds

little racing box from Italy, *Artica II*, which could claim only sixteen tons and appeared to be manned by a crew of Italian army officers. What sort of school ship she might be I didn't know and couldn't find out. But given anything like the conditions which suited her we knew that she was going to do extremely well. She was very small, looked pretty wet, and it was a game effort to put her in the race, so we wished her the best of luck and hoped we'd have a hard northerly from Finisterre onwards, preferably from the Ushant—good hard wind that'd be too much for her and just good for us.

When I saw the Turkish entry, the 100-ton yawl *Ruyam*, lying in the Dart I knew the three-mast *Creole* had plenty to worry her too, for *Ruyam* was a former J-class yacht, re-rigged and beautifully equipped. We could see from *Bellatrix* a horde of fellows working on her beautiful sails—thousands of pounds worth of them—and I couldn't help wondering in passing what sort of school ship she was, too. Of course, she didn't have to be a school ship to be in the race. She was manned in part by cadets, for there were some Conways aboard.

Class for square riggers

Our craft wasn't a school ship either (we qualified because the ambassador had crewed—in part—with cadets from Lisbon). We were not racing against school ships proper nor against any of the square riggers. However, *Ruyam* was supposed to be with them, but I couldn't help thinking that it would have been a good idea to let the square riggers be in a class of their own—the real square riggers, I mean, not the fore-and-afters with a yard or two like the Swedish *Flying Clipper*.

The real square riggers were the Belgian barquentine *Mercator*, the three Scandinavian full-rigged ships and the barque *Sagres*—and that was all. I thought they might have been left alone, and all the others grouped into two classes according to their dimensions. However, I heard nobody bring up this matter in public, though a few doubtful glances were thrown in the direction of *Ruyam*, especially from *Creole* which had to give her an allowance of over thirteen hours on an 800-mile race. It was the spirit of the get-together that mattered far more than any race. Everyone was pleased to see *Ruyam* there, and marvelled at her great mainmast, her gear and the sailing skill of her Turkish master.

Bellatrix was officially in the small class, being only thirty-five tons, but



it was the large class that we were interested in. However, our starting-line was inshore of them so we could not get too close (though a couple of hundred assorted small vessels did their best to do so). The square rigger captains could take no chance on fooling about near the starting line, with so much congestion and maritime traffic of one sort and another.

The start was arranged to be exactly as for a group of yachts which can luff round the line and jockey for the best position right until the gun goes. A full-rigged ship or a big barque, once across the line before the gun, would take maybe half an hour to go about and work back again. So they all compromised by not running for the line at all until the gun had gone, and the start was left to the fore-and-afters—the Turk *Ruyam*, the British *Moyana* (which got away very smartly), the Hollander *Maybe* (a big bald-header) and Lord Runciman's old *Sunbeam* flying the Swedish flag and renamed *Flying Clipper*.

The lovely little *Georg Stage* was first square rigger across the line, looking magnificent and storming along braced up sharp on the starboard tack, under every stitch. When I saw her there, so like the old *Joseph Conrad*, I realised with a sharp pang that I had no longer that good old ship to race there for Britain and—much more important—to use for our boys. I had to sell that lovely ship years before.

The wind was ahead, fresh south-west, and we knew the square riggers wouldn't like it. Nobody likes a beat

out of the English Channel. I had taken a week over it in the *Conrad* once, and I knew my brother had once been a month beating out in the *Hougomont*. *Sagres* doesn't point up too well; the best any of the square riggers will do is about seven points. They might point up sharper in quiet water, but they won't make any better in a seaway. *Sagres* didn't cross the line until half an hour after the gun had gone, and the *Christian Radich* wasn't much ahead of her. When they did come, storming along, they were splendid.

The loss of half an hour at the start would have meant little to them if they had got the wind they wanted: *Sagres*, in fact, might have been just as far ahead by the Monday if she had remained at anchor overnight, for a head wind that fell light and then brought heavy fog was no use to her.



'Moyana' and 'Bellatrix' moored at Dartmouth

It was indeed a source of danger, for she was in the shipping lanes—and she had one very close escape from collision with a big steamer. If she'd been hit it would have been bad. She had all the lovely silver and gold cups aboard, to say nothing of a 400-man crew.

Nobody liked the fog. It hit us before we'd been underway a couple of hours; we all disappeared into it and that was that.

Imposing group

Just before the very bad visibility came we were one of a group which included *Marabu* and the big *Berenice*, with *Artica* and *Juana* both already ahead of us and Radley College's brave old Bristol Channel pilot-cutter *Theodora* plugging along a bit astern (with an Oxford high-school girl at the wheel and a crew of schoolboys). The former Brixham trawler *Provident* was well astern of her. *Provident*, entered by the enterprising Island Cruising Club of Salcombe, had a girl mate. There'd been a ketch with an all-girl crew at Dartmouth, *English Rose II*, but we didn't see much of her after the start. Only the master was male—an elderly mariner who knew Cape Horn three score years ago.

Shocks after the fog

It was Monday before the fog had gone. It lifted suddenly when we reckoned—by dead reckoning, for we'd had no "fix"—that we were about off Ushant. The fog went and we got two shocks. The first was to find the scratch ship of the big class, the schooner *Creole*, almost alongside us, banging about in the calm, and the second was to see the French coast not at Ushant as we had hoped, but about thirty miles up-channel from there.

A bit of a breeze got up when the fog lifted and *Creole* eased her sheets to pass inside Ushant, which she did.



One of the Swedish schooners—*Gladan* or *Falken*—followed suit, but it looked to us as if the tide turned on her and she didn't get away with it. We didn't try that route, but kept well clear of the Ushant and got a better wind.

We were across the Bay in a couple of days, going famously with a fine south-easter on the beam. We thought we were all right then, with an expectation of the good northerlies off the Spanish and Portuguese coasts; but they were off duty. They didn't blow at all. We were becalmed under Cape Villano and again by Finisterre, and though the wireless spoke daily of fresh north-westerners they never blew for us—nor for the other ships we could see around us, which included the full-rigged ship *Sorlandet* and, far off, *Sagres*.

We tried all we could. We worked down near the land, reckoning to be favourably placed when the norther blew. But we dribbled and rolled all down the coast before it blew at all, and we were at anchor in Cascais Bay when at last the true Portuguese trades set in. Then it took us four hours to make the last four miles.

A few lucky ships, *Juana*, *Creole*, *Ruyam* and *Moyana*, had caught the last dying breath of the reluctant northerly and, with the aid of a land breeze or two, got in on the Friday, with the Swedes *Gladan* and *Falken* not far behind them. Of these, *Moyana* won on corrected times.

Surprise, surprise !

Christian Radich was the first square rigger to arrive—which surprised me for I'd thought that in those conditions *Sorlandet* would have had that honour. She is a smart ship and has no screw to drag, but the *Radich* had sailed her own course, well offshore, and it paid. As things turned out she was the only square rigger to be awarded any of the eighteen prizes. No fewer than eight went to *Ruyam* and *Juana*, with the most important two to *Moyana*, and a silver medal for her sailing master, Captain H. Stewart.

It was three o'clock on the Sunday morning before we came in, but *Bellatrix* was first of the older small ships to arrive. She took the silver cup for best performance by a ship built before 1935. Ships were still arriving on the Monday and the Tuesday and when I left Lisbon on July 19, *Berenice* had not arrived. It was that lack of the north wind, the usual summer wind down the Portuguese coast, which delayed us all.

Nonetheless it was a good rally and a grand occasion, and the masters of the big ships were unanimous that

The 'Christian Radich,' the first square rigger home

they would like such a rally again—maybe in a couple of years from now, with the course possibly from Falmouth to Madeira or maybe from Oslo to Ferrol in Northern Spain, or to Santander.

It is to be hoped this happens. There are many more ships which could come in, among them genuine full-time school ships. Indeed, there are over thirty such ships, and more are being built. The captain of *Juana* told me that the Argentine is building a big full-rigged ship as a replacement for the frigate *President Sarmiento*, and it is only twelve months since Chile took over the four-masted tops'l schooner *Esmeralda*. These sailing school ships are a living thing. This was no last flutter !



The Portuguese Ambassador at the wheel of 'Bellatrix'

It was a pity that *Moyana* sank in a gale, off the Channel-mouth, when she had almost completed her homeward passage, but all hands were saved. She was an old ship, and she must have been soon due for replacement. If the School of Navigation of the University of Southampton gets a better ship out of it, all will be well. After all, that would be the proper reward for the efforts of the Sail Training Ship Race Committee. Already an appeal has been launched to aid the School and *The Times* has praised *Moyana* and the idea for which she stood, and Captain Wakeford, has explained why such a sail-training ship is used.

We could do very well with a couple of sail training-ships for the same purpose. Southampton is only one school; if a sail training tender is a good idea there then it is a good idea for the other schools too. The trouble is money and I hope the response to the appeal is tremendous. ⚓

MOST PEOPLE have heard of the Colne—the Essex river that has been famous since the days of the Romans for its oysters. The ten miles of river between Colchester and Brightlingsea offer a fascinating day of exploration for anyone interested in small craft.

The Hythe, as the port of Colchester is called, can take vessels drawing up to ten feet, but it dries out at low water. Even today, when the sailing barge is fast becoming a rarity, one may still see two or three tall topmasts and angled spreets above the roofs of the lower town.

Three miles down river lies Rowhedge, crowned by its curious octagonal church, which is said to have been inspired by the chapter house of York Minster. At the beginning of this century, in the heyday of yachting, Rowhedge was famous for its yacht skippers and crews. To modern eyes, accustomed to the slim Bermudan rig, these old yachts with their long bowsprits, overhanging booms and huge jack-yard topsails appear fantastically over-canvased, but they were raced with great skill and with a ferocity that is unknown today.

In those days yachts were often sent out to the Mediterranean where their lucky owners joined them for the winter. So, many a yacht hand not only had full employment but gained a pleasant familiarity with the ports of Italy and Southern France.

Shipbuilding is still flourishing at Rowhedge. A huge steel "houseboat," presumably a lake steamer for some remote place, nears completion at the iron works—while two naval motor boats lie alongside and, lower down, on the slips stand an R.N.L.I. lifeboat and a Fairmile converted to a yacht.

I was able to have a close look at

★ Sailing barges, an assortment of yachts, small naval craft and even a derelict barquentine . . . all are to be seen in a delightful ten-mile stretch of river famed for its oysters!

By PETER M. WOOD

DOWN THE

Centurion, which is laid up at Rowhedge. This is model making on a really large scale, for she is a half-size replica of a seventeenth century ship fitted out by the Society for the Propagation of the Gospel to tour the ports of the British Isles in 1952 to commemorate the society's 250th anniversary. The original *Centurion* was a 20-gun ship, 131 feet in length, in which the society's first missionary sailed to America in 1702.

The model was built up on the 61 ft. motor fishing vessel No. 153 by J. James and Co. Ltd., of Brightlingsea, in sixty-one working days. The vessel was extended by a new stem and stern, and the fo'c'sle and poop decks were built up on angle-iron frames. The 102 h.p. National diesel engine was retained as power, and the original intention of sailing her with a full

suit of sails was abandoned owing to the difficulty of finding and accommodating an experienced crew.

Those who saw *Centurion* during her tour will remember that she was rigged with conscientious accuracy and though there was much that an expert could criticise—notably the placing of the masts—she was really an admirable transformation if one admits the practical requirements and limitations of such a job.

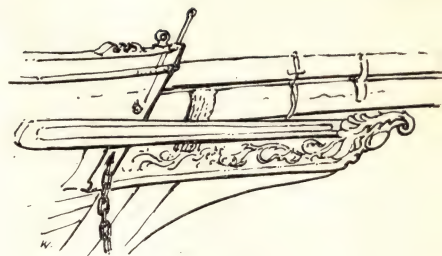
When the folk of Rowhedge speak of "over the water" they refer to their neighbouring town of Wivenhoe which lies a little downstream on the northern bank of the river and may be reached by ferry from Rowhedge.

Wivenhoe is a picturesque old town built on the hillside sloping down the waterfront and was famous for its shipbuilding. Fine schooners, smacks and yachts were launched until the industry declined. The war of 1914 revived local building with iron and steel replacing the oak and pine of the previous century—and the second world war gave fresh impetus with small naval craft, which continue to be seen on the slipways.

Wivenhoe used to be a popular place for laying up large steam yachts and auxiliaries, but these luxury craft are things of the past. I remember Lt.-Commander Grahame-White telling me aboard his *Alacrity* that this huge and handsome steam yacht needed seventy hands when she was in commission! However, there are still a few reasonably large yachts to admire along the waterfront.

The most interesting sight at

'Cap Pilar' showing huge windlass and its handles mounted on the bitt to which the mainstay is secured





'Centurion' at Rowhedge. The curved figurehead is shrouded in canvas which some wit has painted to resemble a spook

COLNE

Wivenhoe today is the derelict barquentine *Cap Pilar*, well remembered for her pleasure cruise round the world. She is, I believe, the only surviving example of a type which was once so numerous—the French Grand Bankers or Terre-Neuvas.

When last I saw her she still appeared capable of repair, though it would have been a very expensive refit. But now she is too far gone. For the present she still exists and one may study in her all the characteristics of her vanished consorts of St. Malo—the traditional bowsprit and jib-boom, the graceful bow, the old windlass with its long "pump handles," the broken deckline stepping up to form quarter-deck and poop . . . there is even a dory still on the skids in the waist.

Below Wivenhoe the river widens and deepens rapidly until off Brightlingsea it merges with the Blackwater Estuary to form the bay in which Mersea Island lies.

The oyster industry

Brightlingsea Creek is usually full of yachts and small craft, but now there are comparatively few of the local oyster smacks. The larger fishing vessels—powerful boats about sixty feet in length—seem to have disappeared completely. These large smacks were known as "skillings," seemingly because they used to fish the Dutch coast off Terschelling.

Many big yachts also once lay at Brightlingsea. When I was a youngster I frequently sailed over there from Burnham, and I remember a large steam yacht rigged as a three-masted schooner that was pointed out to me as one of very special interest. She

was the *Valfreyia*, the floating home of an eccentric American millionaire, M. Bayard Brown, who had become a sort of local legend.

The yacht never left her moorings, either at Wivenhoe or Brightlingsea, but she was always kept under a full head of steam. Occasionally her owner appeared and threw handfuls of money overside—though this never happened when I was handy in the dinghy!

The luxurious 735 ton *Valfreyia* was originally *Lady Torfrida*. After Bayard Brown's death, she was sold to the Maharajah of Nuwanagur ("Ranji" the cricketer) who renamed her *Star of India*. She may be afloat still, in Eastern waters.

Opposite Brightlingsea, behind Mersea Island, lies the Pyefleet

Channel, the home of the celebrated oysters. All around Mersea is a multitude of creeks and inlets in which a yachtsman who likes "ditch crawling" and plenty of mud, can spend several happy days exploring.

The Mersea, Brightlingsea and Maldon smacks are all very much alike—pretty little boats thirty to forty feet long, low aft, and very simply rigged as cutters with a pole mast (a few carried topmasts, but they went fishing outside rather than oyster dredging) and loose-footed mainsail and a long bowsprit.

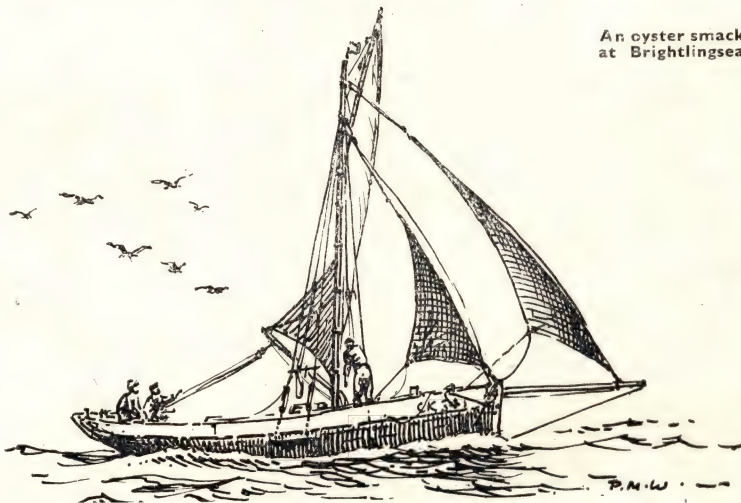
To see the Mersea boats "dredging," jogging along under easy canvas, is a pleasant sight. Speed is not required for oyster dredging, so they work almost hove-to on the grounds. But on regatta days, when unexpected canvas blossomed on the smacks, one could see how well they sail.

Three species of oyster are cultivated—the American Bluepoint, the Portuguese and the Colchester Natives or Pyefleets. While all those enjoy a considerable sale, the "Ports" and "Bluepoints" cannot compare with the "Pyefleets," which are considered to be the finest oysters in the world and fetch very high prices.

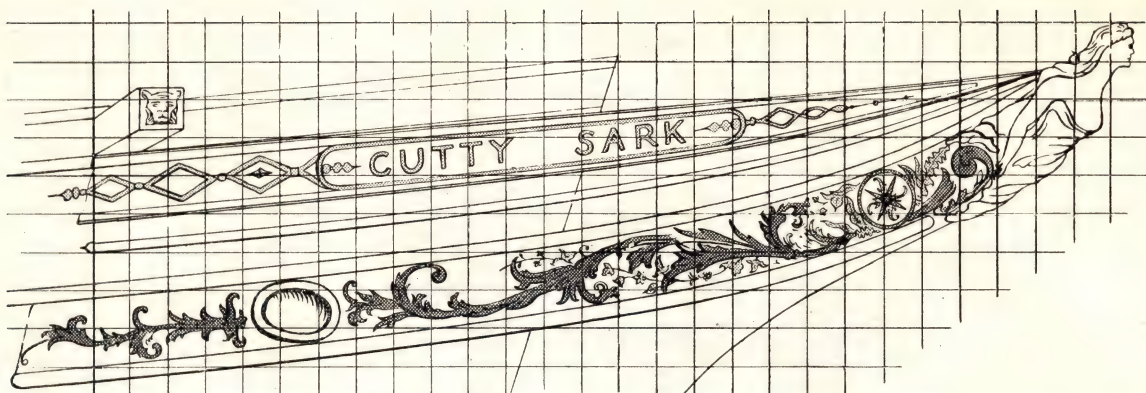
The Colchester Oyster Feast, which was held as far back as the seventeenth century, has developed into an occasion of great social importance with many eminent guests added to the locals and Fishery Company officials.

Before the feast the officials and their friends have a sample taste aboard the Company's boat in the Pyefleet Channel. The season is declared open when the first dredge is hauled and the oysters are tasted with the traditional gin and gingerbread.

Then follows the feast proper in the packed Moot Hall where the happy feasters may swallow as many of the oysters as they can—for nothing! ⚓



An oyster smack at Brightlingsea



CUTTY SARK

... progress report

No. 6

**Some notes on the figurehead
and decoration**

**Above: Details of
head scrollwork**

**Left: The present figurehead
in the workshop at Blackwell**

**Below: Thomas Turner
seen with his carvings
for the 'Cutty Sark'**



AT THE 1955 annual general meeting of the Cutty Sark Society the question of replacing the figurehead with one more worthy of the ship was raised. But as no definite information was available on the original figurehead, which was thought to have been lost at sea early in the career of the ship, it was decided to retain the present one.

However, early this year, among some relics which had come to light, a small boxwood model of a figurehead was discovered. The outstretched arm was missing, but there was every appearance of its having been made as a model either of or for the actual figurehead. This encouraged the Technical Committee to consider the possibility of providing a new figurehead.

The general impression at one time was that the present figurehead was not the original. But after examining it—together with a careful study of all available documentary evidence and contemporary paintings—the conclusion that, basically, it is the original has now finally been reached. There is little doubt that the head and arms are restorations, and that in the process the chest and shoulders have been modified.

In addition the figurehead has suffered from neglect and decay, and it has been decided to make a new one—this being the only practical thing to do.

To employ a recognised sculptor to carve a figurehead would probably have resulted in a fine work of art but not necessarily in a typical Victorian ship's figurehead. However, I was able to introduce to the Technical Committee Mr. Arthur Levison, who, in his youth, assisted his father in his craft of figurehead carving. (Mr. Levison, sen., was one of the last practitioners of the craft. In his time he carved

figureheads for some of the famous Loch line of sailing ships.)

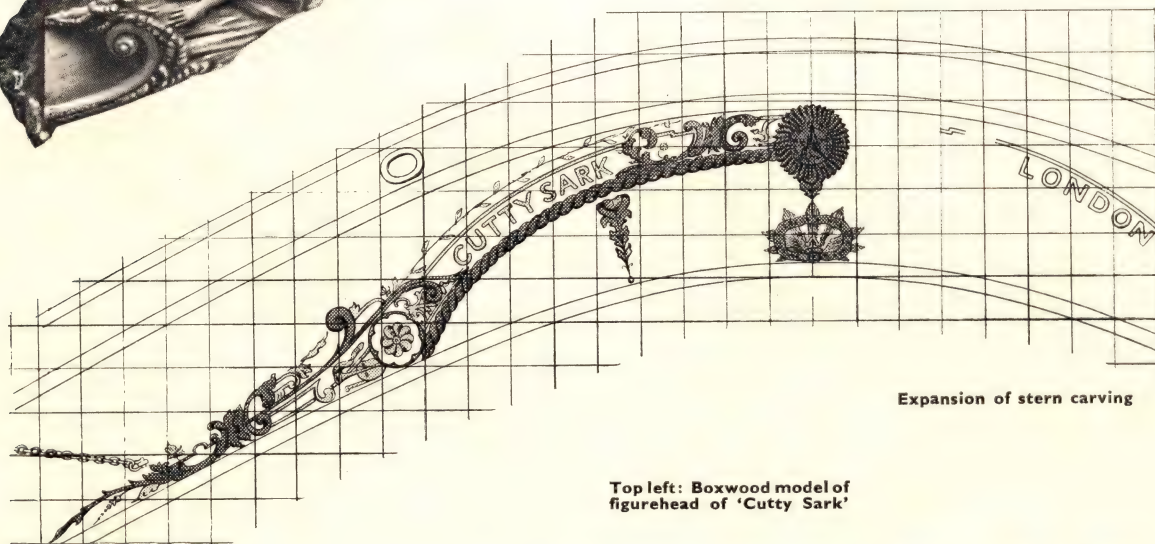
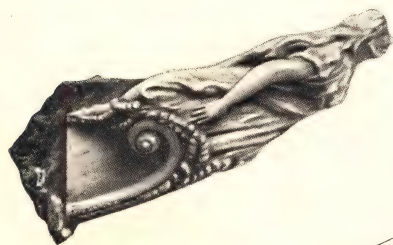
Arthur Levison is well known to model yachtsmen for the many beautiful and accurate models he has built. The marine artist, Leslie A. Wilcox, who is also a keen shipmodeller, has undertaken to collaborate with Mr. Levison—more especially in the installation of the figurehead and in blending it into the lines of the ship. With this combination it is expected that the result will enhance the grace and beauty of the ship and, at the same time, satisfy the severest old shellback critic.

Witches in great abandon !

The work of restoring the *Cutty Sark* is being done by the famous London firm of R. & H. Green and Silley Weir Ltd., the London County Council being responsible for the designs. Mr. G. F. Campbell, who is active in ship modelling circles, is preparing the drawings, under the chief engineer, Mr. S. M. Fuller. (The designs for the decoration of the trail boards and the counter are reproduced by courtesy of Mr. Fuller.) These are based on the original drawings and will be invaluable to the ship modeller or artist who wishes to get these details correct.

The frieze of "witches in scanty attire shown dancing in great abandon behind nannie on the scroll work of the *Cutty's* bow" (to quote Lubbock) was apparently removed owing to the rather restricted ideas of the period, and the more formal decoration illustrated here was substituted.

The principal features of the decoration have been carved very beautifully in yellow pine by Mr. Thomas Turner of the Blackwall yard, some of which can be seen in the accompanying picture. Those for the stern have been made to fit a dummy of the transom plate which was set up in the shop at Blackwell and those for the trail boards will be fitted similarly. The subsidiary decoration will be painted on the ship.—E.B. ⚓



Expansion of stern carving

Top left: Boxwood model of figurehead of 'Cutty Sark'

A new ship-handling tug

— M.S.C. S

by LAUREN



THE TWIN-SCREW motor tug M.S.C. *Sabre*, which has recently entered service, is the first of four vessels ordered by the Manchester Ship Canal Co. Ltd. from P. K. Harris (Shipbuilders) Ltd., Appledore, North Devon.

Intended for ship-handling duties on the Manchester Ship Canal and designed by Burness, Kendall Partners Ltd., she incorporates a number of interesting features. Most important of these is her hydroconic form of hull, which permits an appreciable reduction in labour, building and assembly costs, yet achieves a very high operational efficiency. Particular care has been taken so that the wheelhouse shall have clear all-round visibility—and for this reason the exhausts from main and auxiliary machinery have been incorporated in the two after members of the tripod mast.



The tug in the turning basin at Manchester

The tug has an overall length of 97 ft. (88 ft. b.p.) and a moulded breadth of 24 ft. 4 in. Her moulded depth amidships is 11 ft. 6 in., while she draws 6 ft. 9 in. forward and 11 ft. aft. The main propelling machinery comprises two 6-cylinder Ruston diesel engines, which develop a combined maximum of 1,340 s.h.p. at 430 r.p.m. Pressure-charged, they have Napier turbo blowers and drive cast-iron propellers through 2:1 gearing in oil-operated reverse-reduction gearboxes. Two 48 b.h.p. Lister engines drive a pair of 25-kW 110 volt Laurence Scott D.C. generators. Coupled to each of these generators is a Hamworthy starting-air compressor.

All-welded hull

The twin spade rudders are of double-plate streamlined design and are placed slightly inboard of the propellers. This reduces vulnerability and facilitates shaft removal. The hull is of all-welded construction and has a long clear run to the propellers. Just forward of these is a large skeg for docking and directional stability.

Internal stairs and a hinged door at the after end provide alternative means of access to the wheelhouse. This is fitted with drop windows, of which the three forward and two after ones are fitted with bus-type wipers. Combined throttle and reverse controls are led into four positions in the wheelhouse, though if required the engine and gearboxes may be operated from the engine room.

Very manoeuvrable

Four single-berth cabins are provided for the captain, deck and engine officers, together with one two-berth cabin for the two deck hands. There are separate mess rooms, and a galley and washplace are situated on the starboard side of the superstructure—these being aft of the captain's cabin and lobby.

Canal towage calls for great reliability and powers of manoeuvrability. Therefore the *Sabre* has scantlings that are at least 50 per cent. in excess of classification requirements, and her design is such

with hydroconic hull

SABRE

LAURENCE DUNN

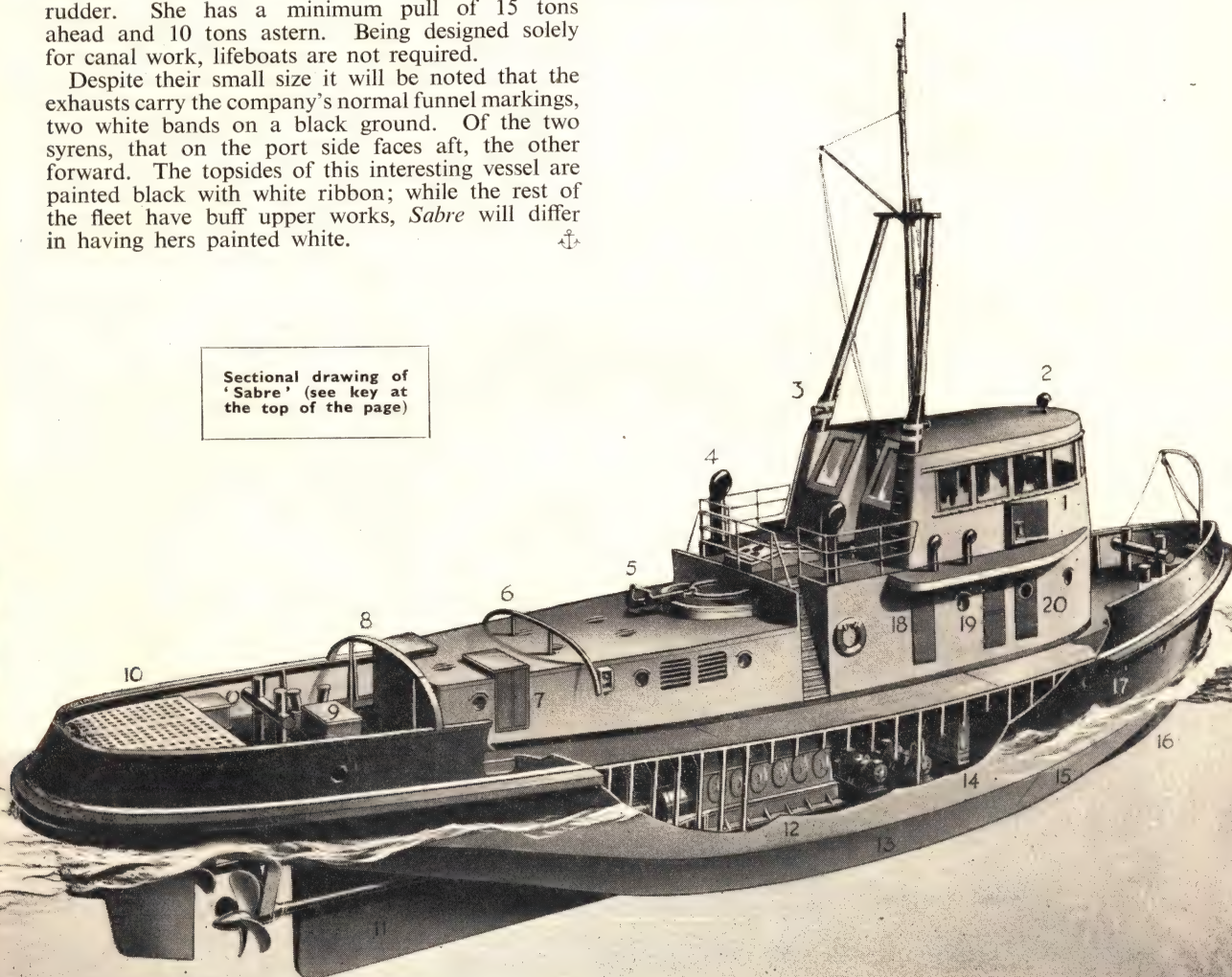
that she may be steered on one engine and one rudder. She has a minimum pull of 15 tons ahead and 10 tons astern. Being designed solely for canal work, lifeboats are not required.

Despite their small size it will be noted that the exhausts carry the company's normal funnel markings, two white bands on a black ground. Of the two syrens, that on the port side faces aft, the other forward. The topsides of this interesting vessel are painted black with white ribbon; while the rest of the fleet have buff upper works, *Sabre* will differ in having hers painted white. ⚓

Sectional drawing of
'Sabre' (see key at
the top of the page)

KEY

- | | |
|---|---------------------------------------|
| 1. Wheelhouse, with engine controls | 11. Skeg |
| 2. Seven-in. diameter searchlight | 12. Starboard Ruston type main engine |
| 3. Main exhausts | 13. Oil fuel in double bottom |
| 4. Engine-room ventilators | 14. Control panel |
| 5. Spring towing hook | 15. Fresh water in double bottom |
| 6. Circular section tow bow | 16. Water ballast |
| 7. Access to engine room | 17. Crew accommodation |
| 8. Tow bow with removable wing section | 18. Washplace |
| 9. Rope store | 19. Galley |
| 10. Steering gear compartment beneath grating | 20. Captain's cabin |



THE British battle-cruiser, although in part derived from the earlier armoured cruiser, was really the brainchild of Admiral "Jackie" Fisher through that same special Committee on Designs appointed in 1904 which resulted in the construction of the revolutionary *Dreadnought*.

The duties of battle-cruisers, as conceived, were to scout ahead of the main fleet of slower battleships and engage the enemy until they should arrive. High speed was required—at least 25 per cent. higher than the battleships and a gun armament of equal calibre to enable them to hold their own in the early stages of the action until the main fleet arrived.

To obtain these qualities on a reasonable displacement, the number of heavy guns was reduced and also the thickness and distribution of armour. Experience at Jutland proved that the armour provided for the earlier British battle-cruisers was inadequate against the plunging fire and superior armour piercing shells of the Germans.

In 1906 the first ships to be laid down were *Invincible*, *Inflexible* and *Indomitable* of 17,250 tons displacement, 562 ft. long, mounting eight 12 in. guns (two less than *Dreadnought*) 16 four-inch and nominally capable of 25 knots on trials, however, and 28 during their active careers. This compares with the 21 knots of *Dreadnought* and 25,000 s.h.p. The armour was 7 in. maximum compared with 11 in. The name battle-cruisers was first applied to these ships in 1911.

Indefatigable class, which followed in 1909-11 (*Indefatigable*, *Australia* and *New Zealand*), were larger—19,200

The story of a short-lived warship design which gave an excellent account of itself in two wars—not, however, without tremendous cost

The battle-cruiser

by JOSEPH A. YOUNG

tons, 578 ft., with the same main armament but four more 4 in. guns, and a similar speed. *Indefatigable* reached 29.13 knots. In these ships the midships turrets (which were again placed in echelon) were farther apart giving a greater arc of fire. This was before superfiring turrets became general and great efforts were made to get good broadside fire. Their appearance, however, was marred by the wide separation of the funnels.

The famous *Lion* came next with the *Princess Royal* and the *Queen Mary* (a larger edition of the other two). By now the displacement had reached 25,000 tons on a length of 675 ft. w.l. The calibre of the guns was now 13.5 in. (in line with the contemporary Iron Duke class battleships), of which eight were carried and 20 four-inchers. These ships were capable of 28 knots. The armour belt was increased to 9 in. and was carried to the main deck.

In 1913 the handsome *Tiger* was built—an improved version of *Lion*

with three evenly-spaced funnels. Of 28,500 tons, she was designed for 85,000 s.h.p. and 28 knots but on trials actually reached 108,000 and 30 knots. Length o.a. was 720 ft. and she had the same main armament as *Lion*, but with 12 six-inch guns. This was the last ship designed in time to take an active part in the first war in its original form. (Space precludes reference to the interesting *Furious*, *Glorious* and *Courageous*.)

Battle-cruisers soon proved their worth. After von Spee's defeat of Cradock's old ships at the battle of Coronel in November 1914, Admiral Fisher in London acted at once. When would *Invincible* and *Inflexible* of the Grand Fleet be ready to sail? The dockyard officials said "Friday, November 13." Fisher said "November 11—they go or you go!" and go the ships did with dockyard mateys still hammering on board.

They were only just in time. The morning after their arrival in the Falkland Islands on December 8, while they were coaling, the enemy was sighted. Our ships were under weigh in less than three-quarters of an hour and having little coal on board soon made 27 knots. By 9.23 p.m. that day *Scharnhorst*, *Gneisenau*, *Leipzig* and *Nurnberg* were no more.

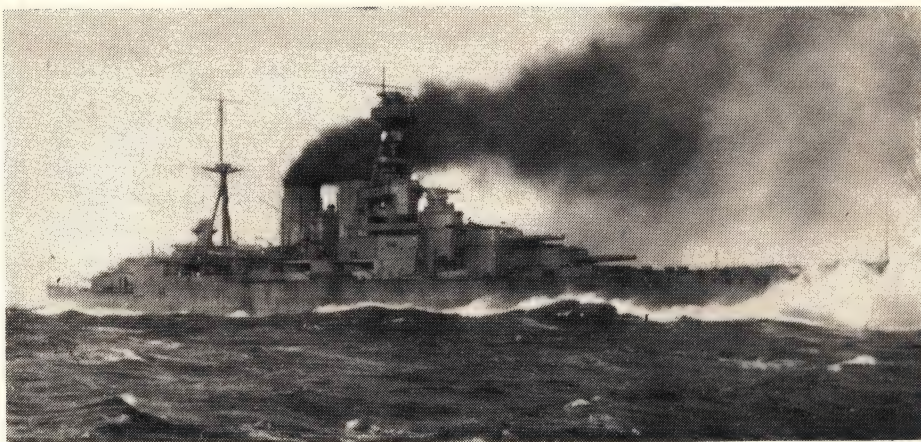
A month later on 24 January 1915, Beatty's battle-cruisers *Lion*, *Tiger*, *Princess Royal*, *New Zealand* and *Indomitable* were in action with the enemy off the Dogger Bank. The German battle-cruisers made for home but were hampered by the presence of the armoured-cruiser *Blücher*, which could only make 25 knots. A stern-chase developed and the Germans were overhauled by the 28 knot British ships. *Indomitable*, being older than the others, had difficulty in



H.M.S. 'Invincible,' one of the first battle-cruisers with a displacement of 17,250 tons

Right: Most famous of all battle-cruisers 'Hood'—under full-steam

Below: One of the victors of the 1915 Dogger Bank action—H.M.S. 'Tiger'



idea

keeping up, but she did so well that she was signalled: "Well done, *Indomitable's* stokers."

Lion scored her first hit at 17,000 yards while the hull of the German ship was still invisible to the gunners. *Blücher* dropped astern and was finished off by the *Indomitable*. *Seydlitz* was also badly hit but owing to her stout construction and the inferior armour penetration of the British shells of the period, she made port. Beatty was so incensed by this inferiority that he left a letter, to be opened in the event of his death, drawing attention to the inadequacy of our shells. *Lion* was also badly hit and entered Rosyth in tow of the *Indomitable*, listing 15 deg.

On 31 May 1916, came Jutland, involving the four vessels of the *Lion* type, *New Zealand* and *Indefatigable*. As the battle began, the battle-cruisers were ahead of the 5th Battle Squadron (Queen Elizabeth class and capable of 24 knots) lest the sight of these new battleships should cause the

Germans to avoid action. Twelve minutes after fire was opened on the battle-cruisers, *Indefatigable* was hit at the unarmoured upper-deck level by almost a complete salvo and sank after a magazine exploded. Half an hour later *Queen Mary* met the same fate and at 6.20 p.m. *Invisible* met her doom.

Beatty remarked bitterly during the action: "There seems to be something wrong with our bloody ships today." As stated by Norman Ough, *Lion* narrowly escaped the same fate.

Resulting from this action the later ships (*Repulse*, etc.) were given greater protection, but this was still inadequate for *Hood* was lost in exactly the same way in 1941. Particulars of the next ships, *Repulse* and *Renown*, were: laid down 1916, 32,000 tons, 794 ft., six 15 in., 12 four-inch, 112,000 s.h.p., 29 knots.

Renown was extensively modernised shortly before the second war; armour was again increased, new engines and boilers were installed and the second-

dary armament changed to 20 4.5 in. d.p. She alone survived this war and was laid up in the Hamoaze until scrapped.

The last battle-cruisers to be laid down were the four ships of the *Hood* class. Only *Hood*, however, was launched and completed due to the end of the first war. She displaced 42,100 tons and was the world's largest warship for many years: 861 ft. long, with eight 15 in. and 12 5.5 in. guns, with 144,000 s.h.p.

All these ships saw extensive service in the second world war. *Repulse* was lost in action with Japanese aircraft with the new battleship *Prince of Wales* off Singapore on 10 December 1941. *Prince of Wales* was hit first and *Repulse* might have escaped, but turning to help she eventually succumbed to five torpedoes. Of the loss of these ships, Sir Winston Churchill said in his war memoirs—"In all the war I never received a more direct shock."

Hood first used her 15 in. guns in anger against the French in the "melancholy action" at Oran in July, 1940. After service "up the Straits," where she was frequently attacked from the air, she returned to the Home Fleet and was sunk in action with *Bismark* on 24 May 1941.

Renown saw much war service being in action with another *Scharnhorst* off Norway in April 1940. She then became Sir James Somerville's flagship in the Western Mediterranean and was in action with Italian battle-ships at long range but even *Renown's* high speed could not catch these "reluctant heroes."

Next came the *Bismark* chase and service in the Eastern Fleet and in 1945 the German representatives arranging the surrender of Norway trod her decks. With her scrapping, the battle-cruiser passed into the limbo—a short span 1906-1946, but one full of interest.



J. SMITH recalls the "good old days" of the Scottish fishing industry with . . .

Some thoughts on

SHETLAND SIXAREENS

THE SHETLAND SIXAREEN is now almost extinct except for a few remaining as lighters or flit boats tending the steamers running among the islands where there are no piers.

These little boats were 21-22 ft. on the keel. They carried a sail almost square which was never used except when the wind was fair for the land, but as time went on the sail was given a higher peak and tacking against head winds because as regular as the wind came ahead. These boats were the mainstay of the crofter

fishermen and many of them were owned by the landlord for whom they fished.

In the old days in Shetland if a young man wanted to go to the Merchant Navy the parents were fined £1 and in some cases they were not allowed to go if manpower was short on the pain of their parents being put out of their home!

Many years ago these boats were brought from Norway in the form of boards ready to be set up by the local boatbuilders. Hundreds were built for the haaf fishing and cost £1 per foot of keel—ready for sea. They

were splendid sea boats and the freeboard was kept low for ease in hauling the lines as they had to be taken in under oars as a rule.

The fishermen had to haul off their lines before going ashore with their catch. The distance was so great that they made just two trips in one week—out on Monday, back on Wednesday, out on Thursday and back on Saturday—weather permitting.

In calm weather I was told that the men sat at the oars from early Monday morning till sundown Monday night, when the highest land of the Shetlands looked like a cap on the water at a distance of 35-40 miles—a long run in a stormy day to the shore.

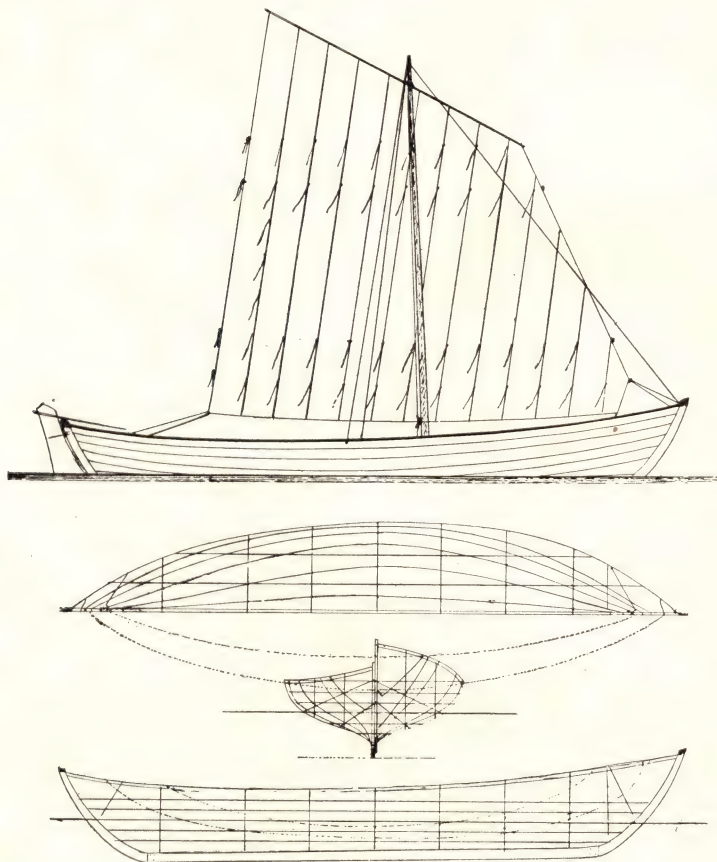
The disaster of 1881 finished the haaf days to a great extent; a few older men still stayed on while the younger men went in for bigger boats decked working for cod and ling in the spring, and herring fishing in the summer months. The few remaining sixareens were used for fishing haddock in the winter-time, replacing the smaller fourereens (12-14 ft. on the keel) that were used for winter boats.

Bad weather drill

In very bad weather the sail was reefed and set across. The sailman was as responsible as the helmsman in a bad day, as he had to watch the following sea and take the back of the sea till the top was at the fore band then bore the sail till the boat had climbed the sea.

Until they arrived at their home port the skipper watched for the sea to begin to break, and, if no way of escape opened up, the helm was put down and the breaking sea taken over the stern. When the sea had passed over the after end of the boat, the helm was quickly put up and the boat put back on her course. Sometimes the fish in the shot would be taken over with the sea! All that could be seen of the skipper was his head through the breaking sea.

These days are all gone and past and the sixareen is a boat of the past except as I have said a few earning their bread as lighters or flit boats and a rare one with an engine installed doing inshore fishing among the islands for halibut with a couple or three men as a crew.



Naval Photograph Club

by P. A. VICARY

DURING the Commonwealth Prime Ministers' recent conference in London, a new naval strategy affecting the use of Britain's world wide chain of bases was discussed.

The vulnerability of static bases in an atomic war was recognised. Alternatives considered were operational fleet trains of supply ships and the provision of secret anchorages, where damaged ships would be patched up until more permanent repairs in safer areas could be made. It was also suggested that Mombasa, Kenya, should be developed into a naval base now that the use of Trincomalee is limited.

Recently, there have been indications that fleet trains for the British and Commonwealth navies were very much to the fore in the Admiralty's programme. The current Navy Estimates provide for repair, supply and replenishment vessels under the heading "Fleet Support and Auxiliaries."

The light fleet carrier *Triumph*, 13,350 tons, is to be converted into a heavy repair ship and the *Perseus* is to become a submarine depot ship. Another cargo liner similar to the *Retainer* (ex *Chung King*) is to be purchased, while a large fleet of oil tankers will shortly be joining the Fleet.

The two Zambesi class destroyers bought by Israel from Britain have arrived at Haifa. They are the *Yafo* ex *Zodiac* and *Elath* ex *Zealous*. The ships will be the largest vessels in the Israeli Navy.

Two new destroyers have been ordered by Chile from the yard of Vickers-Armstrongs, Barrow. The keel of the first vessel has already been laid.

* * *

The anchorage at Scapa Flow—famous throughout two world wars—is to close. At present it is used as a boom defence depot and W/T station.

During the first world war Scapa Flow was used by Admiral Jellicoe as the Grand Fleet base. The "Flow" again came into the headlines when the battleship *Royal Oak* was torpedoed and sunk by a German U-boat during the last war.

It has also been announced that H.M.S. *Phoenix*, the Navy's fire-fighting and damage control school at Portsmouth, may be closed to save expenditure.

* * *

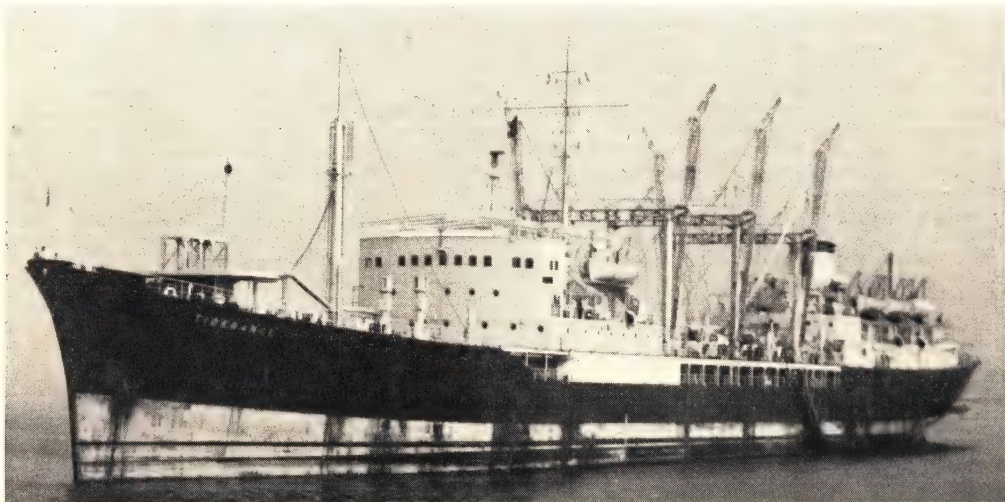
H.M.S. *Loch Fyne* took part in a ceremony at Khorramshahr recently, marking the transfer of Seaward Defence motor launch 323 to the Imperial Iranian Navy. With appropriate honours the White Ensign was hauled down and the Iranian ensign hoisted. Speeches were made by Rear Admiral Rassai, commanding the Iranian naval base at Khorramshahr, and by Captain Barber of H.M.S. *Loch Fyne*.

* * *

H.M.S. *Royalist* (5,900 tons) of the improved Dido class has been commissioned for the Royal New Zealand Navy and is to be flagship in place of *Bellona*, which has returned to the United Kingdom.

* * *

My picture shows the Navy's newest tanker *Tiderange* of 13,160 tons. With her sister ships *Tiderace* and *Tidereach* and the Royal Australian Navy's *Tide Austral* (14,000 tons) they form a useful addition to the Royal Fleet's auxiliary service.





A petrol-driven cruiser entered by T. A. Wills (N. London Power Craft) in St. Albans Regatta

H. J. Taplin contributes

some notes on

POWER BOATS

A FEW YEARS AGO, when radio-controlled model power boats made their appearance, most of us were quite happy if our boats sailed around and answered our radio signals with reasonable regularity.

As we improved, and competitions took speed into consideration, attention was centred on the efficiency of the boat's power unit, and it soon became evident that problems in connection with stability and steering would arise with the higher speeds.

Evidence of these problems was first thrust upon me during the trial of a new 36 in. boat, which was built on "sleek" lines but with sufficient beam, and with every hope of a super performance.

It was fitted with a 2.5 c.c. diesel engine with speed control, and with throttle closed and a speed of about 4/5 miles per hour, steering and stability appeared quite satisfactory. On opening up the engine the speed looked quite impressive (possibly 9 or 10 miles per hour) but when the rudder was applied the boat nearly turned turtle outwards to the turn.

In addition to this reverse banking, steering was very erratic, with a strong tendency to nose-dive when attempting a turn. After this frightening experience I tried lowering the centre of gravity, fitting a lead keel, lowering the rudder to give more leverage, and numerous other tricks including the fitting of special stabilisers, but all with no improvement. After consulting many publications on the subject, I still failed to get the answer and finally I decided that it must be the design of the hull, and reluctantly I scrapped it.

The next venture was with a "44" Elizabeth hull, fitted with a 10 c.c. petrol engine. This was a hull designed by a naval architect and my hopes were high. The first trials, however, were a repetition of my earlier experience, and my disappointment was great.

I began to consider fore-and-aft centre of gravity, which I had never seen mentioned in any of the many publications I had read. The centre of gravity of the Elizabeth was, at this stage, approximately 45 per cent. of the total length of the hull from the stern.

I loaded the stern to bring the centre of gravity to approximately a third of the ship's length from the stern. The result at the next trial was quite spectacular. The speed was increased by probably 50 per cent., the steering became quite stable and positive, and the boat banked perfectly into the turn, without the slightest tendency to nose dive.

Having established the best position for the centre of gravity by loading with weights, this position was noted and, to dispense with unwanted weight, batteries, etc., were moved so that the new centre of gravity was maintained. Obviously no definite position of fore-and-aft centre of gravity can be stated, since it will vary for each hull design, but the same principle appears to apply in all cases.

While on the subject of stability, rounded hulls as distinct from the hard-chine type frequently suffer from excessive lateral rolling. This can be effectively cured by fitting two stabilising ribs running fore-and-aft on the outside of the hull, amidships, about one-third of the total length of the hull, and in the case of a 36 in. hull, they should be about 1 in. deep and 1/4 in. wide, and tapered each end to fair into the hull. They should be situated on each side of the keel, and about 2 in. from it.

Since this article is intended to assist the modeller who is keen to get the best results with his power boat, it might be appropriate to touch on the power unit. Generally speaking the majority of radio controlled power boats are grossly over-propellered.

It must be borne in mind that model petrol and diesel engines develop their maximum power at comparatively high revs (in the region

of 5,000 to 8,000 r.p.m.) and the horsepower developed, in terms of torque, drops off sharply as the revs go down. It is therefore essential for any particular engine that a propeller of such a diameter and pitch should be used as will enable the engine to rev at high speed when under way.

As some guidance to propeller diameters, a 2 in. dia. is normally adequate for 3.5 c.c. diesel. Such an engine would give a good turn of speed to a 36 in. hull of suitable design and reasonable weight, i.e., 9 or 10 lb. A suitable pitch for such a propeller would be about 2 in.

It will, of course, be appreciated that the sweep of the propeller varies as the square of its diameter, so that quite a small increase in diameter will absorb considerably more horse power. With a 10 c.c. overhead valve Jensen engine a propeller of 2 1/4 in. dia. and approximately the same pitch is adequate to absorb the power.

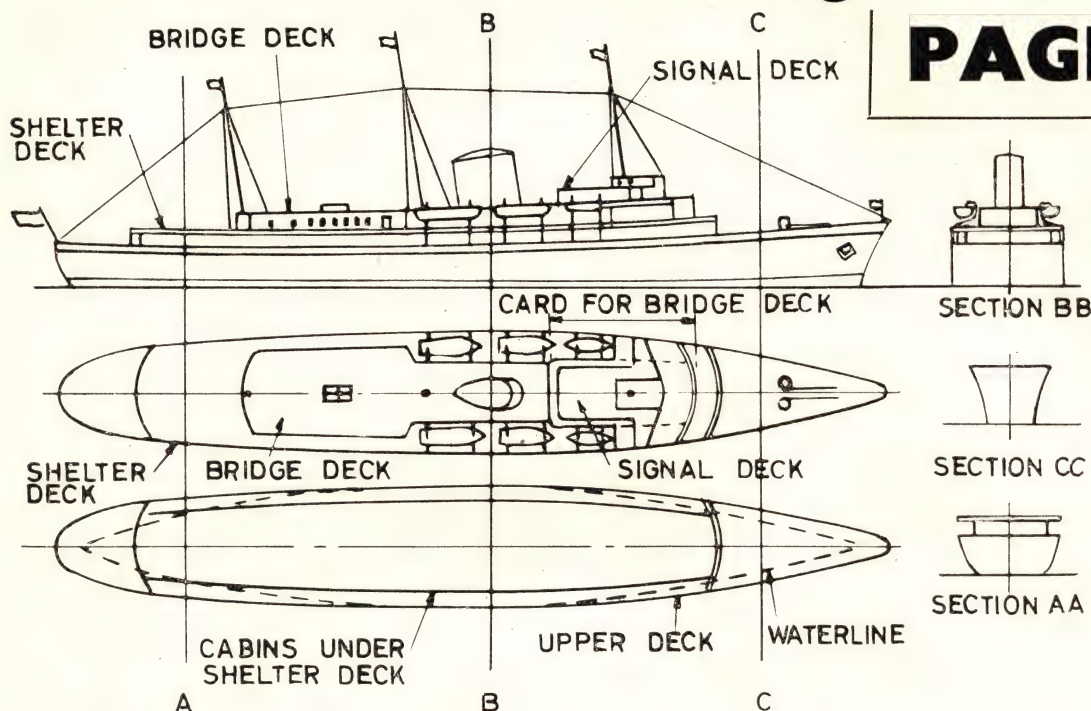
The majority of commercial propellers have a considerably greater pitch than is satisfactory for petrol or diesel engines, but this can often be reduced by carefully bending the blades to the desired degree.

Now a word to the electric power enthusiast. Unlike the i.c. engine, the maximum torque of an electric motor is developed at low revs. It is therefore necessary to use a comparatively large propeller with considerable pitch to obtain the best results. Since, however, there is no yardstick by which we can estimate the power of the average model marine electric motor, it is not practicable to quote propeller diameters or pitches; these can only be ascertained by trial.

It must, however, be realised that model electric motors do not compare in power with even the small i.c. engines. For example, a 6 V electric motor using 2 A can only give approximately 1/60 h.p. if it were 100 per cent. efficient, and as it is a good miniature motor which is 40 per cent. efficient it will be seen that the power available is quite small. ⚓

Try your hand with Britannia
—it's easier than you think!

Beginners' PAGE



IN THE FIRST Beginners' Page, which appeared in the July issue, it was stated that the variety of ship types is, literally, endless. The variety of interests in ship modelling is also endless.

This instalment is devoted to those who wish to make miniature models of large ships. This is a very suitable type of model for the beginner, as, owing to the small scale, very satisfactory results can be achieved without showing a lot of intricate detail. So long as the proportions are correct and the colouring of the prototype is followed faithfully, it is unnecessary to include railings, ventilators, winches and the innumerable deck fittings found on the actual ship.

A very popular scale for the miniaturist is one inch = 100 ft. Some enthusiasts working in this scale have built up collections containing scores of models; these form a valuable means of comparing the size and appearance of the various ships and types represented.

For the first effort I have selected the Royal Yacht *Britannia*. This may seem somewhat ambitious but, in fact, *Britannia* is a comparatively easy model to make. As with most

things designed with an eye to beauty and dignity, her hull has a very simple but graceful outline and her bulwarks are solid with no breaks or railings. Her overall length is 439 ft. thus, if the scale of one inch = 100 ft. the model will measure just under 4½ in. long. The drawings reproduced show the actual size of the model, so measurements can be taken direct.

To make the hull, procure a piece of fine-grained wood, such as lime or sycamore, about 4½ in. long by ⅝ in. wide and ⅜ in. thick. It is important that the wood should have a fine, straight grain, and that it should not be too soft. Yellow pine is often recommended but for a small model a harder wood is preferable, as it is then easier to preserve the accuracy of the form and the sharpness of the corners. After squaring up the wood, cut it to the outline shown in the deck plan, not forgetting that the bow is slightly rounded at deck level.

Next form the sheer of the deck by cutting down the height of the upper surface as shown in the sheer plan, making sure that the lower surface is perfectly flat. The curve of the sheer line is of the greatest importance. It should be perfectly smooth from stem

to stern—higher at the bow than at the stern—and with its lowest point about 3/5 of the length from the stem head. Certain types of ships have more sheer than others and it is therefore important to follow the drawing very carefully. The bulwarks and the camber of the deck may be ignored in a model of this size.

Now mark out on the lower surface the shape of the waterline, as shown by the dotted line on the plan of the upper deck. The stern can then be carved, rounding it between the deck and the waterline as shown in the section AA.

Amidships the sides are vertical but forward they are slightly rounded as at the stern for a short distance, after which they are hollowed to give the flare so typical of a vessel designed for a reasonable speed. This is shown in section CC, and may be produced by using sandpaper wrapped round a stick of suitable diameter. The stern should be rounded at the deck but quite sharp at the waterline. At this stage the model should receive a coat of priming such as shellac varnish and should be rubbed down smooth with fine sandpaper, taking care to preserve the correct shape and the sharp corners.



SHIPS



IN THE NEWS

The motor tug 'Atherfield' with her monitors in action

IT IS APPROPRIATE that during their centenary year the British India Line should take delivery of the *Nevasa*, which is not only the largest ship yet built for them but also the largest ever built solely for trooping purposes. Their third vessel of this name—that of a small village in the Bombay Province—*Nevasa* has a gross tonnage of 20,527.

Delivered by Barclay Curle in mid-July she sailed on her maiden voyage from Southampton towards the end of the month. In the past Government trooping requirements have been met by the chartering and conversion of existing passenger liners. This policy, followed both in peace and war, was somewhat changed by the acquisition of prize tonnage during and at the end of the second world war. Ex-German ships which became Government property were converted and placed under commercial firms for management.

Here it should be noted that the company's pre-war *Dilwara* and

Dunera had been built as a compromise between trooping and commercial needs—this because of the very limited guarantee of employment.

The running down of the Ministry trooping fleet, due to obsolescence, caused the Ministry of Transport to call for tenders for new troopers in July, 1951. As a result *Nevasa* was laid down in May, 1953, her design being the result of joint consultation between the sea transport authorities, her builders and owners.

Her main dimensions are length overall 609 ft., breadth 78 ft. 3 in., and depth 57 ft. She has twin screws and her propelling machinery consists of Parsons geared turbines taking steam from four watertube boilers, which work at 500 p.s.i. and 800 deg. F. Of the 16 aluminium lifeboats, two are motor driven, the rest having manually-operated screws. Six are of exceptional size, being able to carry 160 persons.

Like most new passenger ships *Nevasa* is provided with stabilisers. As may be seen in the picture, she has an impressive appearance, although

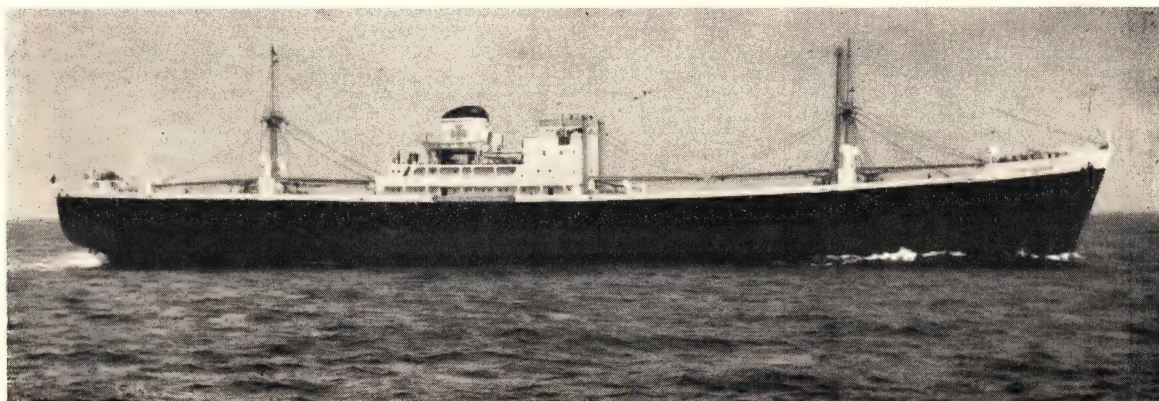
the rather unfortunate position for the foremast detracts from her general symmetry.

AFTER GREEK KINGS

THE VESSELS BEARING the familiar Nomikos funnel emblem belong to several types comprising a number of fast modern passenger ships and several oil tankers, as well as dry cargo carriers. It is to this last category that their latest addition, m.v. *King Aegeus*, belongs. A 13-knot vessel with a d.w. capacity of approximately 12,250 tons, she is owned by Markos P. Nomikos of Piraeus, and managed by Nomikos (London) Ltd.

Rather larger than is general for a dry cargo ship, she measures 468 ft. 3 in. in length overall, has a breadth of 61 ft. 3 in. and a summer load draught of 28 ft. 10 in. Her main propelling motor is a 4-cyl. N.E.M.-Doxford type engine of 4,400 b.h.p. In appearance she is of very clean design, the emphasis being on verticals which, however, are softened by a tapered, domed funnel. The result is a pleasant relief from the all too

The dry-cargo carrier 'King Aegeus,' first of a Greek series



common tendency either towards "bitterness" or the use of exaggerated and often conflicting curves.

A rather unusual but pleasing feature is the placing of the kingposts against the bridge front, abaft and not before No. 3 hatch. This detail contributes materially towards her uncluttered appearance and gives a greater feeling of length.

King Aegeus is the first of a series of new Nomikos cargo ships, all of which will be named after ancient Greek kings.

FIRE-FIGHTING TUGS

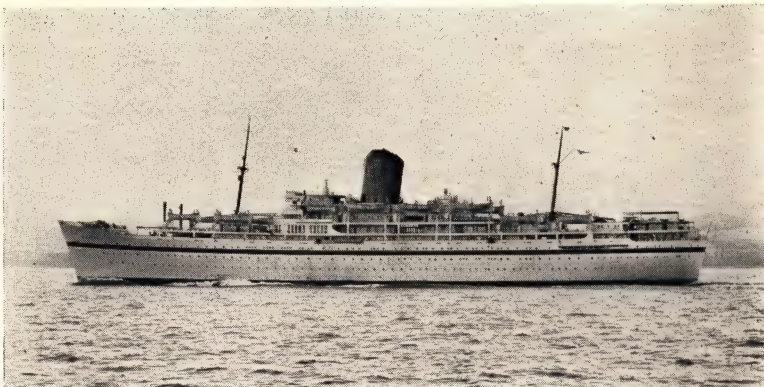
TWO NEW TUGS, *Atherfield* and *Culver*, have recently been built by J. I. Thornycroft and Co. Ltd. for the Red Funnel Steamers Ltd. The first motor tugs in this fleet, they are of particularly handsome appearance. They have been primarily designed for handling tankers at the jetties adjoining the Esso Petroleum Company's oil refinery at Fawley.



By LAURENCE DUNN

The tugs are twin screwed and propelled by two Crossley Brothers 6-cylinder uni-directional diesels. These collectively develop 1,340 b.h.p. at 500 r.p.m.—this with a propeller shaft speed of 200 r.p.m. Each vessel is equipped with fire-fighting equipment in the form of six 4 in. swivelling monitors, four being mounted above the top of the wheelhouse and two at the after end of the boat deck.

In addition to these, four double hose valves with swivel bends are fitted on the main deck. Each of these fire points is capable of discharging water or foam independently. The main fire pump is a 10 in. two-stage Pulsometer centrifugal, driven by a



'Nevasa'—the world's largest troopship. Her gross tonnage: 20,527

6-cylinder Crossley diesel against a total head of 276 ft., equivalent to a pressure of 120 lb. per sq. in.

Each tug can carry approximately 6,000 gallons of foam compound, in two tanks built into the hull. This is discharged into the water stream by an electrically-driven foam liquid pump of centrifugal type, capable of delivering eighty gallons per minute at a pressure of 140 lb. per sq. in. This will allow all units to discharge foam for about ninety-five minutes. The maximum range of water throw is from 175 ft. with a 1½ in. nozzle to 220 ft. using a 2¾ in. nozzle. Foam can be thrown about 80 ft. from monitors or hose branch pipes.

Other interesting features are the bridge control of the engines and a quick release gear by which the towing hook may be disengaged either from the wheelhouse or a position on the boat deck. Bow and side fenders are of solid rubber, while the two 16 ft. lifeboats—carried on Columbus Col-Crescent davits—are of aluminium alloy. *Atherfield* and her sister measure 112 ft. in length overall, 27 ft. in

breadth mld. and have a maximum draught of 11 ft. 11 in. *Atherfield*, which has a gross tonnage of 246, attained a mean trial speed of 11.78 knots. Her static maximum bollard pull was 17.75 tons.

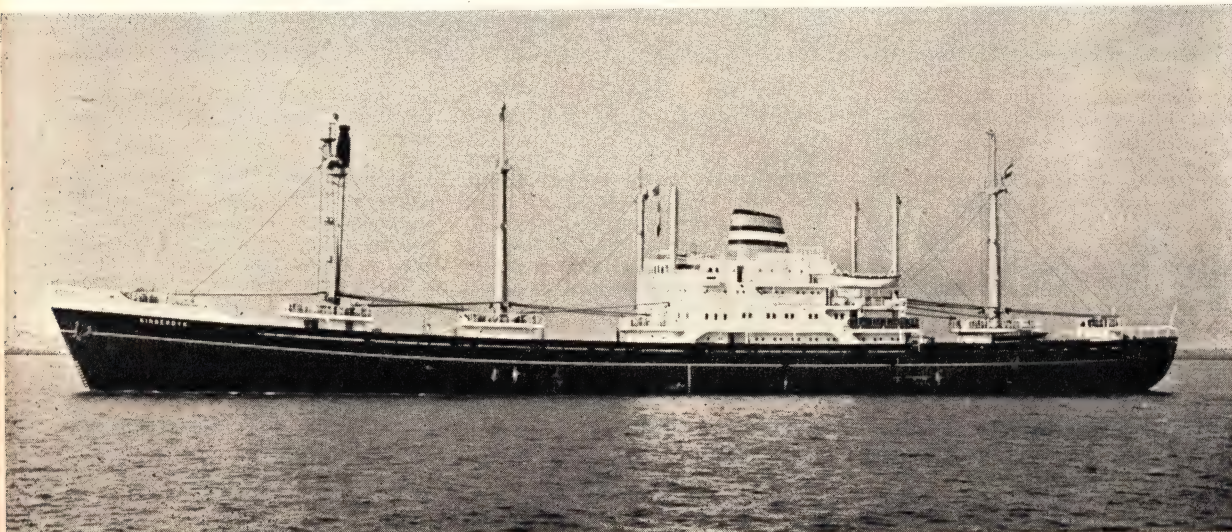
HOLLAND LOOKS AHEAD

LIKE most ships built for the Holland-Amerika Line *Kinderdijk* is of handsome appearance. A product of the Royal De Schelde yard at Flushing, she is of 7,200 tons d.w. and 5,634 tons gross. A sistership, *Kloosterdijk*, is also building in Holland and a third, *Kerkedijk* is being built by the Lubecker-Flenderwerke. The vessel measures 459 ft. 8 in. overall, has a mld. breadth of 61 ft. 9 in. and a draught of 25 ft. 2 in.

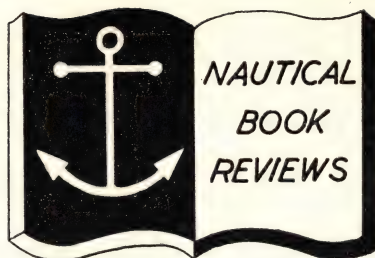
The propelling motor consists of one 9-cylinder Werkspoor Lugt diesel, which has an output of 7,200 s.h.p. at 125 r.p.m. and gives a service speed of 16 knots.

Until the new Seaway is completed these three K class ships will operate between Holland and the east coast of the U.S.A.

'Kinderdijk,' the graceful 5,634-ton Dutchman



An authoritative new book on TANKERS



THE WORLD'S TANKERS by Laurence Dunn. Published by Adlard Coles Ltd., 7, Brunswick Place, Southampton, in association with George G. Harrap & Co. Ltd., London, and John de Graff Inc., New York, price 35s.

The author of this book is already well known to the readers of this journal. He is always well informed and when a special point needs emphasising can always produce an informative drawing. This is evident throughout the book under review.

After a short introductory note on the evolution of hull forms, illustrated with interesting drawings, he takes us right back to the earliest oil-carrying ships which, to our surprise, date from A.D. 670. These were Greek fire-ships. But the earliest commercial carriers of oil in bulk were the new-chwang junks of the early 18th century.

About a hundred years ago when the whaling industry was declining

standing four mast barques *Brilliant* and *Daylight*, were built for the Anglo-American Oil Co. Ltd., specially as oil tankers. Other firms built large tank barges—some of which were even towed around Cape Horn. A notable experiment was that of the *Iroquois* and the *Navahoe*, "the horse and cart of the Atlantic," built for Anglo-American; the *Iroquois* carried about 8,800 tons of oil and towed the *Navahoe* with over 9,000 tons of oil! Between 1908 and 1917 they made 148 crossings, but this experiment, successful as it was, was not repeated.

As tankers increased in size, a number of vessels were built too long for their depth, and trouble ensued. However, the Isherwood longitudinal system of construction provided the answer and tankers continued to grow until, at the present day, they rival in size the large Atlantic liners.

One of the largest, the *World Glory*, has an overall length of 736 ft., a

at the present time than any other type of ship. The illustrations are a notable feature and both author and publishers are to be congratulated on making a first-class job of the book.

The Sheet Anchor. Journal of the Wembley Ship Model Society, Vol. 4, No. 4.

The current issue of this valuable journal is well up to the standard of its predecessors. It contains a feature on an American river steamer, more on sailing barges by S. E. Wurr, working and fastening of planking by J. B. Jenkinson and several other useful articles.

The transactions of the Guild of Model Shipwrights are also included, which add considerably to its value. There is also the usual crop of illustrations, all of which are very well reproduced. Copies and full particulars from the editor, W. O. B. Majer, 81, Paxford Road, North Wembley, Middlesex.

Bulletin No. 21, May, 1956. Published by the International Radio Controlled Models Society.

This issue contains an interesting article on a misguided missile by Raymond F. Stock, some early experiments with transistors by R. Fry, comment on radio licences by J. W. Pendlebury, and a number of other features of interest to the radio control enthusiast. Full particulars of both the bulletin and of the society



(owing to the scarcity of whales) oil wells were discovered—and the oil carrying industry as we understand it really began.

The first tankers were, of course, sailing ships, but steam ships quickly developed . . . until the modern tanker with engines aft was evolved and became the accepted type. Towards the end of last century a considerable number of sailing ships was adapted for transporting oil; sometimes cases were used.

Between 1900 and 1903 eight large sailing ships, including the two out-

The m.t. 'London Prestige,' 16,194 tons. From "The World's Tankers" by Laurence Dunn

figure which is only exceeded by a new Japanese ship. *World Glory* has a deadweight capacity of 45,509 tons and even larger tankers are projected. The various types of tankers designed for special purposes, including the combined ore and oil carrier, the whale oil factory, and tankers for handling different cargoes out and home, are fully dealt with.

This is a most timely book, as the tanker is being built in greater numbers

may be obtained from the secretary, C. H. Lindsey, 55, Tenison Road, Cambridge.

Maritime and Naval History, an annotated bibliography by Robert Greenhalgh Albion. Published by the Marine Historical Association, Mystic, Connecticut, U.S.A.

This publication can be recommended as being comprehensive and useful to the student of ships and the sea or of maritime matters generally. Fuller particulars may be obtained from the publishers.

THE CROWNER, as Shakespeare calls him, is a very important man in the English system of justice. It is now getting fashionable to hold an inquest on the Model Engineer Exhibition.

This is just as it should be, for the exhibition really consists of the efforts of all concerned; competitors equally with traders, judges with stewards and the host of people who make up the staff—not forgetting the visitors themselves.

If a man and his wife cannot agree, what chance is there for 50,000 visitors, 1,000 competitors and 400 staff? The importance of the inquest becomes apparent. It lets off steam. It draws attention to shortcomings; it allots approbation; it promises the fullness of the programme; it welcomes new ideas. In short, our grumbles and praises are as British as the inquest which is held by the coroner, however humble he may be and however small his audience.

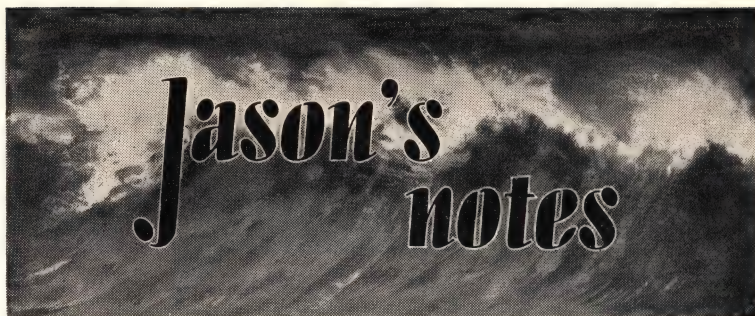
What is a miniature?

MY correspondents impel me to return to this question mainly because some of the views expressed are startling. For example, Mr. Freeston, himself a miniaturist (old style) and the chairman of one of our most go-ahead societies, covers a wide range of argument. I disagree most profoundly with his first dictum, i.e. that all ship models are miniatures of their prototypes and there is no such thing as a miniature ship model. I suspect that the writer had his tongue in his cheek when he wrote this.

Anyone will agree with the first part of his statement but I, for one, still hold to the view that there *can* be such a thing as a miniature ship model. Further Mr. Freeston suggests that the present system of classification of ship models is outmoded. He boldly goes for three classes of ship models—a. the working model (sail or steam); b. the static model (sail or steam); and c. the scenic model. The latter may be briefly described as a ship—or ships—in a natural background.

In a conversation with him we agreed on the type of model—Randall's *Martinet* discharging coal; Money's *Windjammer* cut down to a coal hulk; E. N. Taylor's *Steamer entering locks of Manchester Ship Canal*. Then what about the settings? Must all b class be full hulled ships? Will all waterline models automatically be class c.

To cap all he suggests no limit as to size. The organisers have a duty to the public and to the purse. To my certain knowledge the organisers have been tolerant on the matter of size for many years past. So who are the final arbitrators on these



matters?

Perhaps it is the readers, plus the visitors, who exert the force usually called public opinion.

Well, there it is. I haven't exhausted all the arguments propounded by my correspondents, but the inquest will help to crystallise the pros and cons.

Is the present method of classifying ship models outmoded? Do you agree that they should be divided into: (a) working model; (b) static; and (c) scenic categories?

No class for open boats

ANOTHER of the grumbles arising from my correspondence on miniatures is that which says there is no classification for open boats. Yet year after year the open boats slip into the marine section on a "by guess or by God basis." Who would be an organiser? I can well imagine a class for open boats—and no entries. Nevertheless, of late there has been a decided trend towards open boats mainly due to the new Draper technique.

New Manchester society

I HAD surprises galore when I visited this new society. There were two members of the original organisation which I founded more than a quarter of a century ago. They have a permanent workshop headquarters and it seems to work very well.

Their policy and ideas vary tremendously from the usual run of a society. For example, they work under each other's eyes—and the H.Q. is shared by another society concerned with the arts.

While I was there some members

of this other society took part in the meeting being held, effectively too. Around the walls were a dozen or so paintings and on shelves and tables a number of ship models in various stages of completion. I wonder if there is anything in the old nineteenth century political dictum: What Manchester thinks today England will think tomorrow.

The work I saw was of a very high standard and by the time you read this it will have been seen by thousands of visitors to the exhibition. I found one outstanding similarity to Belfast. The artists and the engineers go for each other hammer and tongs. The result is that each understands the other's point of view.

For the lone worker I should explain that this question of Art *versus* Precision is slowly coming to a head. It may be that very few lone wolves have given much thought as to which category they are in. . . . I hope to return to this important aspect of modelling in the near future; meanwhile, how do you stand?

Packets and clippers

WHILE taking a party of Thames Shiplovers round the National Maritime Museum recently I was very impressed by the display of four sailing ships in the Nineteenth Century gallery. They are models of four famous ships and exemplify two distinct types of ships: the Western Ocean packets with very little sheer and one topsail only on each mast, and the later introduction of double topsails.

Don't write and tell me that the *Marco Polo* was *not* a Western Ocean packet. Nor was the *Lightning*, but they did exemplify them. And they were American-built as was the later *James Barnes*. Between them they held some wonderful records.

Close by is the model of the famous clipper *Thermopylae* by our old friend Ike Marsh. Yes, they make a fine quartette of models and well worth a visit. Even if you've been to the museum before the layout and the models are not the same.

THE main topsail H is one of the most important canvases and needs special care when rigging. It is usually set to windward of the peak halyards when racing. But for normal sailing the tack 36 is always set up on the windward side, leading over the gaff, and is changed over every time the schooner goes about (Fig. 6).

Main sheet 41 leads through two blocks and belays on cleat.

Halyards 34—reeve through the sheave at the topmast head and purchase to port or starboard according to which side topsail is hoisted. Sheet 35—reeves through the block or sheave at end of the gaff, on through the single block under the jaws, then purchases at the foot of the mast, fall belaying at fiferail.

Tack 36—set up through purchase at foot of mast. Topsail shrouds 28—these lead over cross trees as shown in the left-hand side of end view. Backstays rarely appear to have been set up, if carried they led right aft with runner tackles.

Foresail D, peak halyards 23. Standing end set up starboard side of deck, reeves through the single lower block, on to the single block on the gaff, back to one sheave of the double block, to the single block at the outer end of the gaff, and to the second sheave of the double block, the fall going to purchase on the port side, belaying on the bulwarks.

Throat halyards 24. Purchase goes to starboard. Peak line 25 belays on the starboard pin rail. Sheet 26.

E. J. MARCH continues his instructions for making this interesting model

The Gloucester Fishing

Reeves through two blocks, the lower one working on small iron horse, and the fall belays on a cleat in front of the main fiferail.

In the heaviest weather the only sail carried is a double reefed foresail.

Fore topsail E. This has to be lowered and run up again every tack, otherwise it would foul the main topmast stay and the triatic stay. It is set in a similar manner to main topsail H.

Fore topmast backstay 19 leads from score at topmast head to front of upper cap of main masthead. Main topmast stay 29 leads from the score main topmast to the back of the upper cap on the fore masthead.

Triatic stay 33 leads from the front upper cap, the main masthead, to the back of the upper cap on the fore masthead.

Main topmast staysail F or "fisherman," halyards 30. This is hoisted by two sets of halyards and is set flying, always to windward of the fore topsail and gaff.

Tack 32 leads to the pinrail under the foreshrouds on the weather side. Sheet 31 leads to cleat aft on the lee side (Fig. 6).

Topmast shrouds 18. These lead over the crosstrees as shown in the right-hand side of end view.

Bowsprit shrouds 42. Tie two bights of thread round the score at the outer end and lead in through holes already drilled in the hull. Tie threads across to form jibnet 48.

Forestay 10. Tie eye round lower part of the fore masthead, lead down and fasten off on eyelet on the bowsprit.

Jibstay 5. Tie eye round upper part of the fore masthead, lead down through hole in bowsprit, on down to lower hole in stem to make outer bobstay 43. Lead on through upper hole and back to outer end of spar to form inner bobstay. If preferred this end can be left long and will serve for jib tack 8.

Fore topmast stay 1. Tie round the score at topmast head and lead down to outer end of the bowsprit. If preferred the other end left at the masthead can be led back to make the backstay 19 and so save a bunch of thread.

Headsails, jumbo C. Fine sew to boom and fit gooseneck into fitting on bowsprit.

Halyards 11. Standing end fast starboard cheek, leads down to single block head of sail, back to the single block port cheek and down to purchase set up on deck foot of mast, then belays at fiferail.

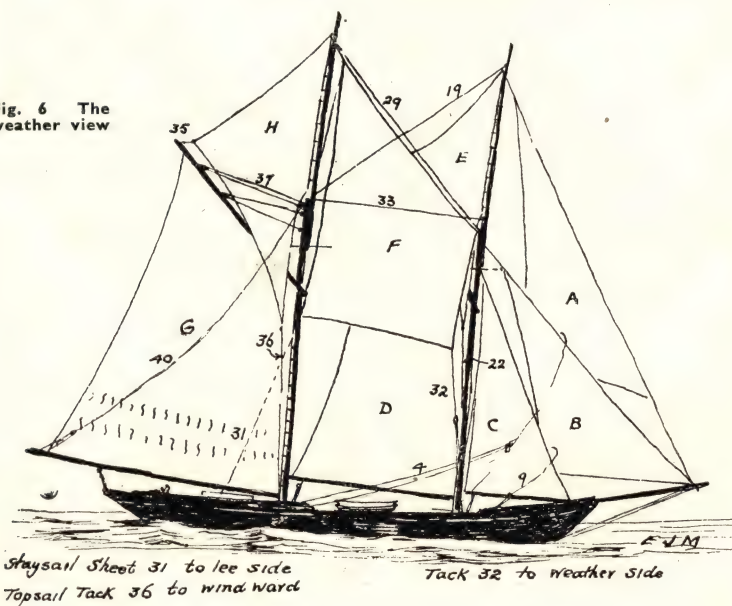
Use bobstay end

Downhaul 12. Belays round cleat on bowsprit. Sheet 15. Reeves through two blocks, the lower one working on horse, fall belays round cleat on fore side of fiferail. Jib B, tack 8 can be made from end left from bobstay.

Halyards 6. Standing end fast port side of upper cap, reeves through single block head of sail, back to block starboard side down through purchase, fall belaying starboard pinrail.

Downhaul 7 fall belays pinrail over bowsprit. Sheet 9. Fall leads through

Fig. 6 The weather view



Schooners—4

fairlead on rail and belyas round cleat under bulwarks.

Flying jib A, halyards 2. Standing end fast round topmast head, reeves through single block head of sail, back to single block seized round the mast and down to purchase on the port side, fall belaying at pinrail on bulwarks.

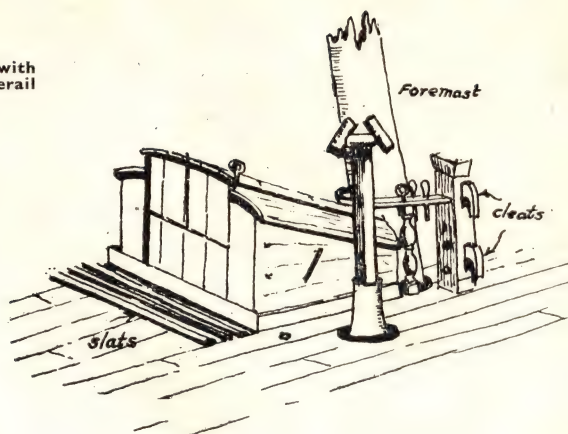
Downhaul 3. Fall belyas on pinrail over bowsprit. Sheets 4. Fall belyas on cleat under main shrouds.

Lightboard 47. Make from thin card, coloured red to port, green to starboard. Glue to fore shrouds. Trucks. Make from spot of glue, flattening out when nearly set.

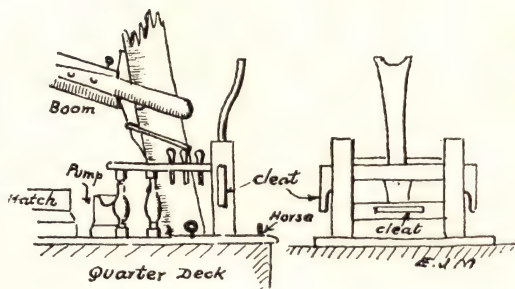
Flag. Make a small coloured flag, fix on staff made from tiny pin coloured black, and fix at main truck. See it flies true to wind.

Adjust all sails until they set to perfection for wind on starboard beam. Make baseboard and set hull with a good list to port. Make up sea from gesso, coloured greeny-blue, with plenty of broken water to leeward. Be sure your sea shows plenty of wind blowing, for gales rather than calms are found on the Grand Banks.

Fig.2: The foremast with its semi-circular fiferail

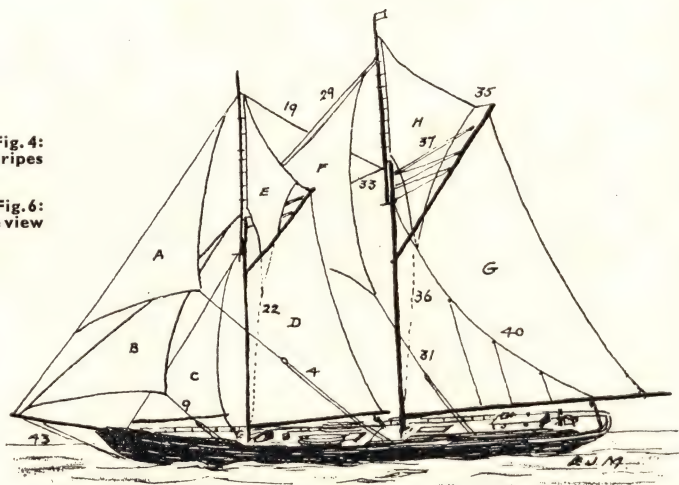


Right, Fig. 3: Mainmast, the pump and foreboom



Left, Fig. 4: Note gripe

Right, Fig. 6: The lee view



Fore topsail E set to leeward
Tack 22 to windward

Main topsail H set
to windward
Topping lift 40 fitted
with legs

ORIGIN OF BRIDGE

SIR,—Does any reader know how the expression “bridge” originated? For the life of me I cannot see any connection between a control room and a bridge as it is commonly known. Cobham, V. BARRAT. Surrey.

IN SEARCH OF A SCHOONER

SIR,—After reading Mr. Villiers’ excellent article last month, it occurred to me that other readers might be interested in another picture of *Marcel B. Surdo* at Trapani. Woodford Green, L. HOWES. Essex.

TURRET SHIPS

SIR,—H. M. Le Fleming (Mailboat, July) is correct in pointing out that the turret ships (*Scorpion*, *Wyvern*, *Royal Sovereign* and *Prince Albert*) all preceded *Monarch* but may I remind him that my original letter emphasised that my remarks referred only to bona fide seagoing ships and, on this basis, I think *Monarch’s* position holds good. *Royal Sovereign* and *Prince Albert* were officially designated as Coast Defence Ships while *Scorpion* and *Wyvern* appear to have been always rated thus after being taken over for the Royal Navy.

With reference to the discussion on torpedo nets in *Lion*, also in the July issue, I can confirm from my own photo collection that booms were still fitted in March 1915, removed 1915/16 (pre Jutland), restored July 1916 and finally removed later in 1916.

Incidentally, it might not be generally known that *Lion* rejoined the Grand Fleet in July 1916, still minus Q turret which was not replaced until some time later.

Nets began to be discarded in the Royal Navy during 1913/14 when they were removed from a number of pre Dreadnoughts.

The King George V class were the last battleships of the Dreadnought era to be completed with nets. *Iron Duke* ran trials with them November 1913 to March 1914 but these were removed prior to commissioning for service in March 1914 and never fitted in the other three ships of this class.

The bows of ‘*Marcel B. Surdo*’ photographed by a reader at Trapani. See “In search of a schooner”

They appear to have been variable in Grant Fleet ships 1914/16 but had been finally removed from all by end 1916.

Hamilton, DERISLEY TRIMINGHAM. Bermuda.

SIR,—In the last issue of SHIPS AND SHIP MODELS it was suggested, in reply to “R.W.’s” letter for suggestions on how to get started, that he should start by building to a scale of 100 ft. to 1 in. and work his way up.

I cannot agree with this. Small inaccuracies—deckhouses not square, etc.—introduced more due to inexperience with tools than anything else, are magnified greatly on this scale—enough even to put the novice “off.” I am of the opinion, and I think many readers will agree with me, that “R.W.” would be better advised to start on something large and to leave some of the more fiddly detail out; the result will be much more gratifying to him, and others to whom his first attempt is shown, than a diminutive not quite right looking thing that one’s first 100 ft. to 1 in. always turns out to be—his finger ends and temper will be the better off for it as well.

Alnwick, CHRISTOPHER WALKER. Northumberland.

SPEED TERMS

SIR,—The question of “knots per hour” to which Mr. Evans (Mailboat, August) refers, has recently been the

subject of some correspondence in the *Mariners’ Mirror*.

It seems that the expression was at one time widely used and appears in the writings of numerous seamen, both naval and mercantile, and not least in those of Joseph Conrad, who can hardly be called a maritime ignoramus. Since the early years of this century, however, it seems that the simple “knot” has changed from a unit of distance to a unit of speed.

I should be interested to hear other readers’ comments on the accuracy of C. S. Forester, but somewhere—I believe in the *Happy Return*—Hornblower orders Bush to have the guns loaded and run out, and I have heard that at that time the guns were always kept loaded. Again, in *A Ship of the Line*, in the description of an attack on a British convoy by two French luggers off Ushant, I believe that the author suddenly gets his port and starboard tacks, or the direction of wind, muddled up.

However, I have not got my Hornblower books with me as I write, and I may easily be muddled myself. Ipswich, H. W. MOFFAT. Suffolk.

ATOMIC SUBMARINES

SIR,—Mr. Clements’ letter (Mailboat, August) concerning the possible effects of radiation from the atomic

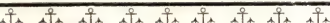


pile of a damaged A-boat is slightly off beam in my opinion. True, the effects of radiation would undoubtedly be severe but if the submarine was damaged so badly that the pile leaked, surely the craft would be out of action in any case.

A near hit from a depth charge—close enough to damage the batteries or fuel tanks of an “old-fashioned” submarine—would probably mean the death of the crew anyway. No matter what the motive power, the life of a wartime submariner is appallingly hazardous!

Dartford,
Kent.

J. WICKEN.



READERS' PHOTOGRAPHS

Pictures and illustrations published on these pages win Percival Marshall Book Tokens (value 10s. 6d.). If you have a photograph, drawing or diagram send it to the Editor SHIPS AND SHIP MODELS, 19-20, Noel St., London, W.1.



READER'S THOUGHTS

SIR,—Having just received my current issue of SHIPS AND SHIP MODELS I read with interest the diversity of opinion expressed on what should be included or rescinded from its pages. Most of us realise how impossible it is to satisfy all tastes, yet to my mind, SHIPS AND SHIP MODELS certainly makes every effort to fulfil this ideal.

One or two correspondents suggest that ships of the past should not be over emphasised. Well, be that as it may, yet in this so-called atomic age, the future still remains obscured and therefore the past is the only guide we have to go forward on. In fact, every year expired thereby provides us with added experience of the bygone. But it is not yet given to us mortals (and that is well) to foretell precisely what will happen tomorrow.

Doubtless the sailing-ship era and its men must always remain (quite rightly so) a source of curiosity and interest to many readers. In fact, I have on occasions expended both time and money in going out of my way to meet a surviving “shellback” and may I say humbly listen to tales from the lips of a fellow seaman who has lived so much longer on this earth than me, of what was done at sea in those far off days. Difficulties overcome by such men can well prove a source of inspiration in moments of stress, to the man in command today and no doubt in other walks of life too.

It is many years since Conrad wrote: “The sea life as it was on those bygone days, with its particular demands problems and hardships has vanished



One of the MacBrayne line—'Lochbroom'—arriving at Oban. See “Road to the Isles”

from the world . . .” Nevertheless the profession today still calls for resource, alertness and even courage too.

So I say—carry on with your good work. Although articles on present-day ships are welcomed and read with understanding, do not forget the past, especially that era when sail reached its zenith.

Finally, as a constant and serious reader of the magazine since its inception, I was always under the impression that it was basically printed for ship modellers and their problems, which feature should not be neglected today.

M.V. *Nuculana*, A. THOMSON
On the High Seas. (Master Mariner).

YORK CLUB ?

DEAR SIR,—For quite a while and by several methods, I have tried to contact ship modellers and ship lovers in York to start a club. Any interested readers might care to write to me.

Heworth, York. W. R. COWL.

● Letters will be forwarded.—EDITOR.

ROAD TO THE ISLES

SIR,—Mr. Smith's story of the MacBrayne line in last month's issue was of special interest to me as I spent my holidays last year near Oban and often saw the trim vessels of the line.

My picture shows *Lochbroom* arriving at the North Pier, Oban.

Clapton,
Essex.

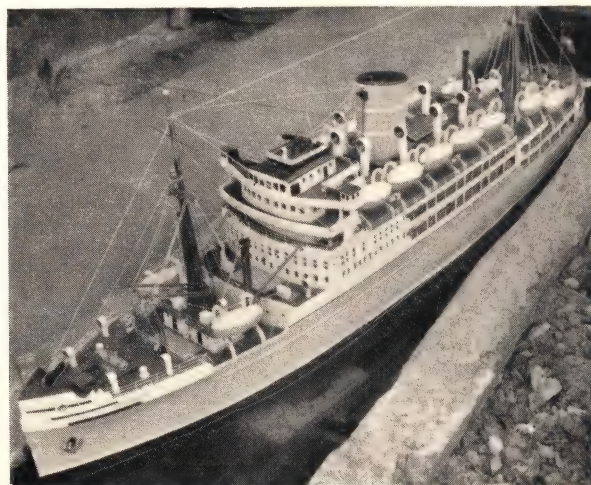
S. MILNER.

MARITIME MINER

SIR,—The picture of *Strathnaver* shows my first attempt at modelling and it took me just over two years to complete the job. The ship is 5 ft. 6½ in. long and 11¾ in. wide. A 24 V motor drives the twin props and there are ten 2½ V bulbs fitted.

I took up modelling four years ago after an accident in my pit and what started as “occupational therapy” is now a full-time hobby!

Newcastle upon Tyne. NORMAN REES.



An ex-miner made this delightful model. See “Maritime miner”

Readers' HINTS

REALISTIC SURROUND

MANY EXCELLENT cabin-cruiser models are spoiled by the lack of a metal surround to the windows, their owners having neither the materials nor the required skill to make it correctly.

Excellent results can be obtained, however, by using the following cheap and easy method. Buy a roll or two of thin three-core solder (6d. a roll), roll it out straight, then press it

SPIDER BANDS

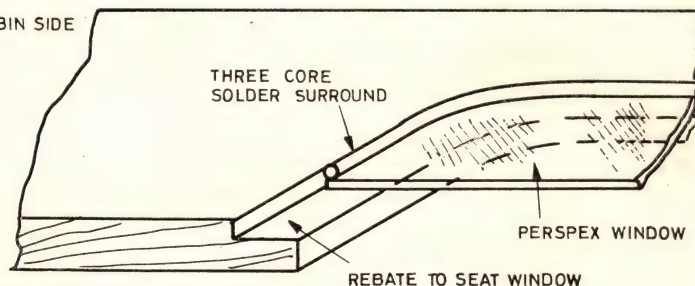
THE PRICE of spider bands being beyond my pocket, I made them in the following manner. The clipper ship I am building is roughly $\frac{1}{4}$ in. to 1 ft. and I used Nettlefold brass screw eyes, size 000.

Into a piece of 1 in. \times 1 in. oak, I screwed as many as I needed for each spider band. I did not screw them right up and opened the eyes slightly, then with a thin flat file I made them bright and clean and tinned them where the joint is to be. The eye was closed and a good dab of solder placed on (Fig. 3).

I cut through the centre of the eye with a fine hacksaw, opened it out and filed to shape as Fig. 5. A narrow band of card was shed round the mast where required and I spaced out the pins and painted the bands and pins black to imitate iron.

ERNEST GOULDEN.

CABIN SIDE



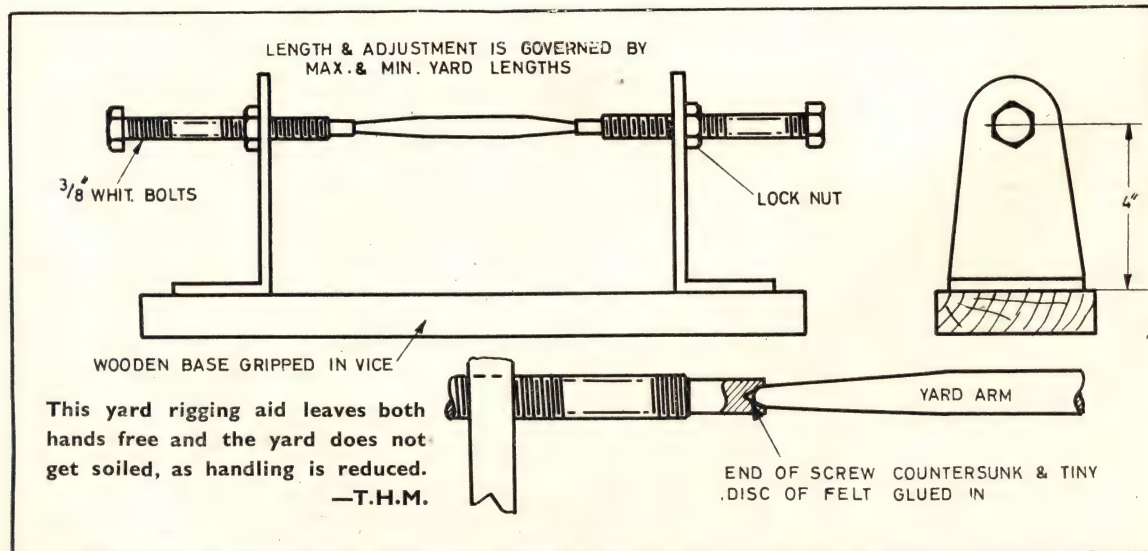
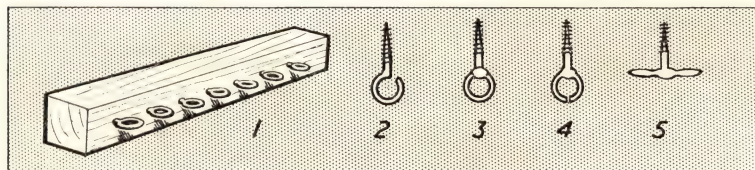
Contributions to this feature are invited from readers. Hints should be as brief as possible and sketches should be made to illustrate the idea. A Percival Marshall book token value 10s. 6d. will be awarded for each tip published.

round the inside of the window. Cut off when the two ends meet and join carefully. It is very soft and, therefore, quite simple to shape. It is easier if the operation is carried out when the window or part is glazed.

A touch of Durofix will hold the surround securely in place. It polishes well and gives an excellent representation of a chromium-plated surround—which is so fashionable on cabin cruisers these days.

The solder is admittedly of round section but it can be pressed when in position to resemble the correct section.

H. V. YOUNG.



A fine kit for a big cruiser

I HAVE already had several kits from The Model Shop, Newcastle upon Tyne, but the one I received recently for their cabin cruiser *Northern Star* is the best of the lot.

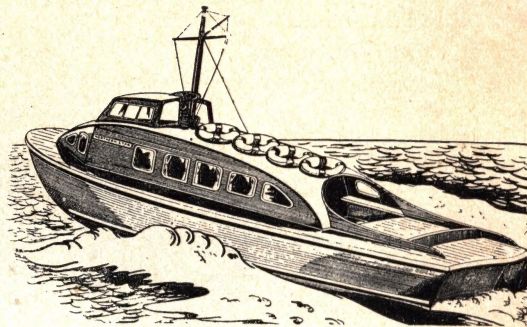
This first impression was more than confirmed when I got down to building the boat. Everything is so well planned and the materials so

good and so accurately cut that it is a sheer delight to fit them together. In only five hours I had assembled the hull and got it practically ready for the outer skin.

This is quite a big boat, being 54 in. long overall with a 15½ in. beam. It has a displacement of 40 to 50 lb. I have always advocated a big boat for a working model; on a reasonable sheet of water the average small model looks lost when it gets a little way out, and its ability to carry its superstructure and its power plant is always a bit of a worry.

In this model the freeboard is from 6 in. forward to 4 in. aft, and thus the risk of water getting in is negligible. Moreover, it has a large buoyancy space along each side and under the floor, and is therefore unsinkable. The underwater design incorporates a flared bow which, by the method of construction adopted, can be easily and accurately formed.

Owing to the design of the stern water cannot wash aboard when reversing under radio control. The interior of the boat is arranged as one large compartment, 44 in. long, 8 in. wide and 6 in.

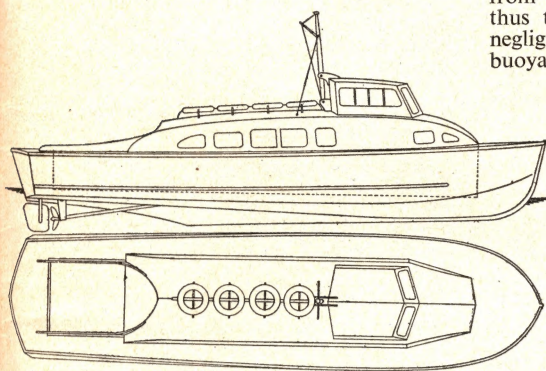


deep, with an inclined platform amidships made of ½ in. 9-ply to which the power unit is bolted. The cabin lifts off in one piece, exposing the entire radio and power plant. The joint is rubber-sealed thus ensuring watertightness.

The framing is of the best 6 mm. 5-ply, with ⅛ in. resin-bonded aircraft-quality ply for the skins, and hardwood rubbing strakes are included. The kit includes a stern tube and propeller shaft, with skeg bracket, rudder with tube and tiller, and metal brackets and bolts for a diesel engine.

The power unit may be either an electric motor or diesel engine; if the latter its capacity may be from 2.5 c.c. to 10 c.c.

The design is based on the 40 ft. custom's launch built by Messrs. J. Bolton and Sons Ltd., of Poole, Dorset. The price of the kit is £9 19s. 6d. delivered free. ⚓



READERS' QUERIES

Victory Model

Q For some time now I have wanted to build a scale model of *Victory*, which I had the great pleasure to visit in Portsmouth some years ago.

Could you please let me know the best way to go about purchasing the necessary drawings?—R.E.B., Winchmore Hill, N.21.

A A set of six drawings for this office. These are drawn to ½ in. scale and are complete for the hull and rigging. Price 30s. 0d. per set.

The book, "The Anatomy of Nelson's Ships" by Dr. C. N. Longridge, contains a full description of this ship with fully-dimensioned details and plans. This is also obtainable from this office, price £3 3s. 0d.

Propeller sizes

Q Am I correct in saying that the largest ship propeller ever made was fitted to *Great Eastern*? Friends say the *Queen Elizabeth* has the biggest ever, so perhaps you can

cast the final vote.—M.B., Maidenhead, Berks.

A Without consulting the actual figures we believe the propeller fitted to the "Great Eastern" was the largest ever. The "Queen Elizabeth" has four propellers and it is extremely unlikely that any of them is as big as that of the "Great Eastern."

Steering query

Q Why are the expressions "port" and "starboard" used to denote "left" and "right"? Further, is there any advantage to be gained by the use of these terms?—W.V., Woodford, Essex.

A The word starboard was originally stearboard and derives from the fact that the oar or board used for steering was operated on the right-hand side of the ship (looking forward). The opposite word, larboard, was changed to port about a century ago to avoid confusion with starboard.

These expressions are so well estab-

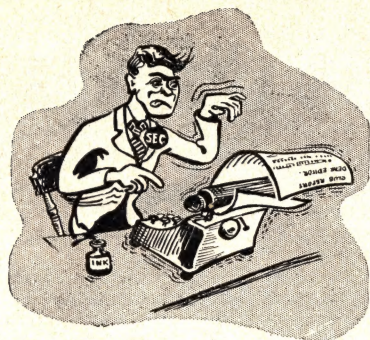
lished and presumably convenient that, they were adopted for aircraft automatically. Their main advantage is that their meaning is unaltered from whatever angle the ship or aircraft is viewed.

Q Can you tell me when the first rifled naval guns (as distinct from smooth bore cannon) were used, and were balls or shells employed in these guns?—S.A.C., Harlow, Herts.

A The use of spiral grooves in guns was first adopted in 1620 by Koster of Birmingham and a rifled cannon with 13 grooves was owned in Berlin in 1664. The first recorded use of rifled guns in actual warfare was in Louis Napoleon's campaign in 1859 and the evolution of rifled ordnance followed on.

Contemporary pictures of the Crimean War show round shells bursting, presumably having been fired from smooth-bore cannon. An engraving of 1874 reproduced recently in "The Engineer" showed a pointed shell, and the gun, although a muzzle-loader, was presumably rifled.

Although the greatest developments in heavy ordnance were made for Naval guns, rifling and the use of shells was first developed for land warfare.



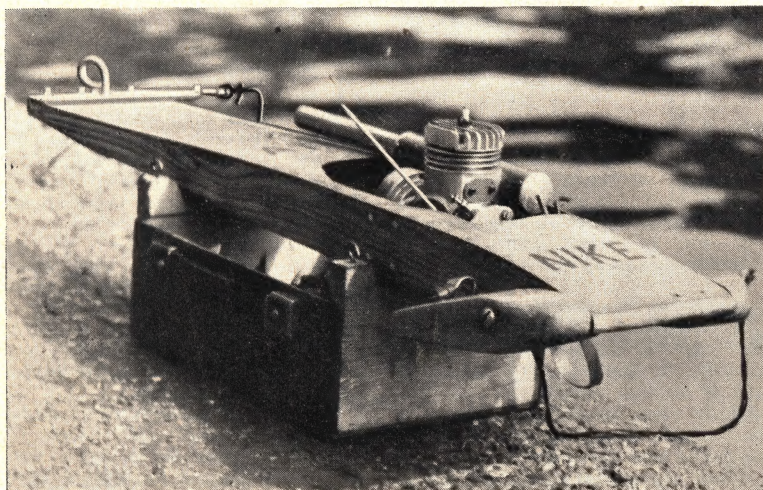
News from the clubs

THE Southend M.P.B.C. open regatta was held on July 15. Its success can be judged by the fact that eight clubs gave support and nearly 100 entries were received for the various classes.

In the nomination event a rather fast course deceived many, and P. Jessett, of Blackheath, did well to gain a first with nil error. C. J. Vann was second and gained the only home club success of the day. A very pleasant feature of this event was the rapidity with which the competitors came up to the start—there was never a dull moment, especially for the timekeepers!

A very flukey, but light, wind prevented any competitor from scoring a maximum in the steering event. The winner, E. Vary, of the Victoria Club, gained first with 13 points.

The speed events were plagued by the launching jinx. In addition a derisive "small boy choir" operated for one un-named competitor. George Lines, after a promising test run, struck a bad patch with transmission and fuel trouble, but the sun shone for F. Jutton with his new class B boat *Nike* running faultlessly he recorded fastest time of the day.



RESULTS

Nomination			
1.	P. Jessett ..	..	BH.22
2.	C. J. Vann ..	..	SO.8
3.	J. Cleary ..	..	BH.14

Steering			
1.	E. Vary ..	..	V.24
2.	L. R. Fawcett ..	..	FG.4
3.	A. C. Clark ..	..	WG.1

R.T.P.			
A. Class			
1.	J. Benson ..	..	52.4 m.p.h.
2.	J. Chandler ..	..	51.5 m.p.h.
B. Class			
1.	F. Jutton ..	..	56.4 m.p.h.
C. Res. Class			
1.	H. Poyser ..	..	51.5 m.p.h.

LANCASHIRE AND CHESHIRE S.M.S.

Jason was the attraction at the last monthly meeting. Many questions were fired and the answers were prompt and so easily given that members wondered why they hadn't thought of them before! He then gave a few hints on the club's exhibition which is booked for September 20.

The club is co-operating with the local society of arts and all the members are enthusiastic about this arrangement. There should be about 20 models of view in various stages of construction and complete.

IPSWICH NAUTICAL RESEARCH SOCIETY

Secretary is now E. Gazey, 21 Locarno Road, Ipswich. Treasurer is H. W. Moffat, 9 Founereau Road, Ipswich.

Y.M. 6-m. O.A. and SOUTH LONDON M.Y.C.

September 2. A-class race for the Gosnell Trophy; 16, M-class team race v. Hove and Brighton M.Y.C., at Surbiton, start 10.30; 30, A-class race for the Nairn Cup, start 11 a.m.

POOLE M.Y. and P.B.C.

September 2. Queen's Cup race (M class); 9, Coronet points; 16, Team race; 23, M. v. 10R club; 30, Coronet points.

HOVE AND BRIGHTON

September 2. Danson M.Y.C.; 8 and 9, M.Y.A. National Championship (36 in.); 16, Y.M. 6m. O.A. at Rick Pond; 23, Highgate M.Y.C.; 30, Third club championship.

WEMBLEY S.M.S.

Secretary is now J. Hardy, 11 Osbourne Avenue, Kings Langley, Herts. September 10. J. H. Craine talks on the Model Engineer Exhibition; 24, "Reading a draft and building a model," by H. W. Beesley.

HAMMERSMITH S.M.S.

September 4. Club night; 18, Talk by J. H. Craine, "Marine models at the Model Engineer Exhibition." All meetings start at 7.30.

FLEETWOOD M.Y. and P.B.C.

September 2. Foster Trophy for M-class; 9, Pearson Trophy for A-class; 22, Open prize race for M-class; 23, Wade Trophy (Northern district v. Scotland) for M-class.

F. Jutton's new Class B boat, 'Nike.' The imposing propeller stock is just visible over the top edge of the tool box. The sides of the hull are in oak



Sea Adventure Books

CRACKER HASH

By Cmdr. J. R. Stenhouse, D.S.O., O.B.E., D.S.C.
In this account of his early voyages in a "Cape Horner," Cmdr. Stenhouse gives the reader a vivid picture of the hard discipline and tough conditions endured by the apprentices who went to sea on sailing ships at the turn of the century. However, notwithstanding the unpleasant jobs, bad food and often unjust treatment, Stenhouse contrived to enjoy himself and describes with a wealth of anecdote and humour his adventures afloat and at ports of call. Vice and violence abounded on the waterfront and the risk of being shanghaied was ever present. Needless to say, the young apprentice and his mates got into trouble: the outcome is described in the book. 240 pages. 16 photo plates. 15s. postage 1s.

UNDER FOUR FLAGS

By Captain Herbert Edwards, R.N.(Ret.)

The fascinating story of what is possibly a unique career during which the author served under the *Norwegian Ensign*, the *Red Ensign* of the Merchant Navy, the *Blue Ensign* of the R.N.R., and finally the *White Ensign*, at the turn of the century. Prevented by personal reasons from joining the Royal Navy, Capt. Edwards went to sea at 14, and did not achieve his ambition of becoming a Naval Officer until he was 31. In the intervening years he had sailed round *Cape Horn* in a Norwegian barque before his fifteenth birthday, served a four-year apprenticeship in sailing ships and risen to the rank of Second Officer in Royal Mail ships. "*A fine story of the sea*"—Daily Mail. 223 pages and a number of photo plates. 10s. 6d. postage 8d.

THEIR LAWFUL OCCASIONS

By Capt. Herbert Edwards, R.N.(Ret.)

This second book is the sequel to "Under Four Flags" and continues the story of a remarkable career. The author, while on an R.N.R. training course in 1913, was offered a commission in the Royal Navy and the new book takes up the story at this point. Herbert Edwards served both at sea and ashore as a gunnery officer during the Great War and had his full share of excitement. In 1939 he was recalled to active service and relinquished his post as Governor of the Royal Merchant Navy School to take command of a Shore Establishment in the Isle of Wight. Successive promotions followed and before he retired in 1946 he was twice Chief of Staff—at Liverpool and Glasgow. After leaving the Service he was appointed as a military governor in the British Zone of occupied Germany, and he describes his impressions of a defeated people. 256 pages and a number of photo plates. 15s. postage 1s.

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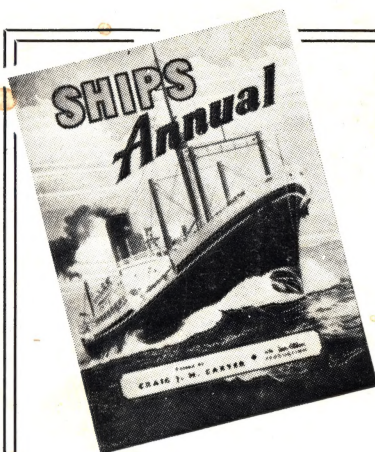
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